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ABSTRACT

The purpose of this 2-day hearing was to determine what the federal role should be in sponsoring educational research and development (R&D) and the extent to which the nation's research agenda reflects America's key educational priorities. Thirty-nine statements, letters, and supplemental materials are presented. The Office of Educational Research and Improvement's proposal concerning funding for a center on the study of the education of disadvantaged students is discussed. Educational R&D efforts by the House of Representatives, and the Administration's commitment to educational research are considered. Shifts away from basic research between 1980 and 1985 toward dissemination have undermined the research enterprise across the entire Department of Education (DOE). Issues discussed include: literacy and reading, school improvement and effectiveness, bilingual education, accountability, school finance, the business community's role, educational achievement, education for poor and at-risk populations, dissemination, education information, demonstration research, educational testing and evaluation, coordination, communication, cooperation, and excellence in education. Enhanced federal education research programs, research laboratories, centers, and information bureaus are needed. Educational R&D efforts must be conceived within the context of the interdependent nature of the research/development/dissemination triad, since the impact of R&D knowledge depends upon how effectively that knowledge is delivered to educational practitioners and policymakers. It is recommended that the DOE needs to establish a National Education Information Dissemination Policy. (TJH)

[illegible] HEARINGS ON THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT [OERI]

HEARINGS

BEFORE THE

SUBCOMMITTEE ON SELECT EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR HOUSE OF REPRESENTATIVES

ONE HUNDREDTH CONGRESS

SECOND SESSION

HEARINGS HELD IN WASHINGTON, DC, APRIL 20 AND 21, 1988

Serial No. 100–71

Printed for the use of the Committee on Education and Labor

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OVERSIGHT HEARING ON THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT [OERI]

WEDNESDAY, APRIL 20, 1988

House of Representatives,
Subcommittee on Select Education,
Committee on Education and Labor,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:10 a.m., in room 2261, Rayburn House Office Building, Hon. Major R. Owens (chairman of the subcommittee) presiding.

Members present: Representatives Owens, Williams, Bartlett, Hayes, Sawyer, and Goodling.

Staff present: Maria Cuprill, staff director; Laurence Peters, legislative counsel; Bob Tate, legislative analyst; Jillian Evans, committee clerk; Gary Granofsky, research assistant.

Mr. Owens. The hearing of the Subcommittee on Select Education will come to order. Today we are pleased to have a distinguished array of very knowledgeable panelists. We do appreciate their being here. We want to assure them that this is the beginning of a long and thoughtful process. We take it very seriously. We are pleased to have their investment of energy and time and concentrated thought power, and we hope that they will stay with us throughout this very important process.

I have an opening statement which I will read only partially, in order to maximize the amount of time that we have for the panelists. A well-focused and adequately funded research and development program will produce the same quality and amount of results and benefits for American education that similar research and development activities produce in other spheres of human endeavor. Our public health programs, our space race, and our defense apparatus are all replete with obvious examples of the fruits of substantial investments in research and development.

Since among civilized people in general and public decisionmakers in particular it is no longer necessary to offer arguments to prove the value of research and development, this hearing will be concerned primarily with the focus of our past, current, and future research and development effort in education.

What have we learned from our investment to date? Are we having an impact on current critical needs? Is the present system of research centers, laboratories, information bureaus, and independent researchers meeting the needs of the education community? Given the inevitable limitations on resources, are we concentrating first on the most urgent needs?

Last but not least is the question of how we can enlist the support of the larger decisionmaking community as we strive to close the awesome gap between the present research and development investment for education and the amount of research and development funds needed to mount a realistic and scientifically respectable level of activity. The present paucity of appropriations is a scandal. There is no legitimate defense for the failure of this Nation to apply standards to its mission in education similar to the standards applied to its mission for the exploration of space. Indeed, the space exploration effort has reached a plateau partially due to the absence of the brain power needed to obstacles at many levels. The complexities of our present society mandate a close relationship between the quality and quantity of our education effort and the quality and quantity of all other social, scientific, and industrial activities.

The process of winning support for higher authorization and appropriation levels must begin internally, within the education community. Can we agree on priorities? Can we agree on the need for a greater sense of urgency in meeting certain critical education needs? Can we forge meaningful systems of accountability to combat academic apathy and academic corruption? Can we correct our own shortcomings in the areas of communication and cross-coordination, in the areas of elitism and scholar tribalism? Finally, to doubting decisionmakers, can we pledge to achieve meaningful results if our efforts are adequately funded?

Perhaps the long overdue new initiative of the Office of Educational Research and Improvement, which proposes to fund a center on the study of the education of disadvantaged students, can be utilized as a lightning rod to open a new era of adequate funding for critical problems. Perhaps the limited amounts presently being proposed for such a center should be used to finance independent research on this urgent topic and to develop a master plan for a research center which is worthy of the task, to be funded later on at a much higher level in the next fiscal year. Perhaps additional funds should also be made available for existing centers, laboratories, and information bureaus which join the effort to establish such a pivotal center by offering to collaborate with each other and with independent researchers on activities which are relevant to the achievement of the goals of the center.

And, finally, perhaps we can maximize an effort to reach out to the private sector for its contribution toward the very ambitious but worthwhile goal of improving our efforts to educate disadvantaged students. Publishers, consultants, computer manufacturers, and others should be vigorously recruited. And beyond the special thrust to launch this new center, the private sector should be invited to be an ongoing partner with the Federal Government in the Nation's overall research and development mission. The exploration of new ways to structure such a partnership—possibly even a "quango"—is an item of great interest to the Subcommittee on Select Education. We are anxious to hear new ideas and proposals.

I yield to Mr. Bartlett for an opening statement.

[The prepared statement of Hon. Major R. Owens follows:]

SELECT EDUCATION SUBCOMMITTEE OVERSIGHT HEARINGS ON THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT (OERI), APRIL 20, 21, 1988

OPENING STATEMENT OF CHAIRMAN MAJOR R. OWENS

A WELL FOCUSED AND ADEQUATELY FUNDED RESEARCH AND DEVELOPMENT PROGRAM WILL PRODUCE THE SAME QUALITY AND AMOUNT OF RESULTS AND BENEFITS FOR AMERICAN EDUCATION THAT SIMILAR RESEARCH AND DEVELOPMENT ACTIVITIES PRODUCE IN OTHER SPHERES OF HUMAN ENDEAVOR. OUR PUBLIC HEALTH PROGRAMS, OUR SPACE RACE, AND OUR DEFENSE APPARATUS ARE ALL REPLETE WITH OBVIOUS EXAMPLES OF THE FRUITS OF SUBSTANTIAL INVESTMENTS IN RESEARCH AND DEVELOPMENT.

SINCE, AMONG CIVILIZED PEOPLE IN GENERAL, AND PUBLIC DECISION MAKERS IN PARTICULAR, IT IS NO LONGER NECESSARY TO OFFER ARGUMENTS TO PROVE THE VALUE OF RESEARCH AND DEVELOPMENT, THIS HEARING WILL BE CONCERNED PRIMARILY WITH THE FOCUS OF OUR PAST, CURRENT, AND FUTURE RESEARCH AND DEVELOPMENT EFFORT IN EDUCATION. WHAT HAVE WE LEARNED FROM OUR INVESTMENT TO DATE? ARE WE HAVING AN IMPACT ON CURRENT CRITICAL NEEDS? IS THE PRESENT SYSTEM OF RESEARCH CENTERS, LABORATORIES, INFORMATION BUREAUS AND INDEPENDENT RESEARCHERS MEETING THE NEEDS OF THE EDUCATION COMMUNITY? GIVEN THE INEVITABLE LIMITATIONS ON RESOURCES, ARE WE CONCENTRATING FIRST ON THE MOST URGENT NEEDS?

LAST BUT NOT LEAST IS THE QUESTION OF HOW WE CAN ENLIST THE SUPPORT OF THE LARGER DECISION MAKING COMMUNITY AS WE STRIVE TO CLOSE THE AWESOME GAP BETWEEN THE PRESENT RESEARCH AND DEVELOPMENT INVESTMENT FOR EDUCATION, AND THE AMOUNT OF RESEARCH AND DEVELOPMENT FUNDS NEEDED TO MOUNT A REALISTIC AND SCIENTIFICALLY RESPECTABLE LEVEL OF ACTIVITY. THE PRESENT PAUCITY OF APPROPRIATIONS IS A SCANDAL. THERE IS NO LEGITIMATE DEFENSE FOR THE FAILURE OF THIS NATION TO APPLY STANDARDS TO ITS MISSION

IN EDUCATION SIMILAR TO THE STANDARDS APPLIED TO ITS MISSION FOR THE EXPLORATION OF SPACE. INDEED, THE SPACE EXPLORATION EFFORT HAS REACHED A PLATEAU PARTIALLY DUE TO THE ABSENCE OF THE BRAIN POWER NEEDED TO OVERCOME OBSTACLES AT MANY LEVELS -- ADMINISTRATIVE AND ORGANIZATIONAL AS WELL AS TECHNICAL AND SCIENTIFIC. THE COMPLEXITIES OF OUR PRESENT SOCIETY MANDATE A CLOSE RELATIONSHIP BETWEEN THE QUALITY AND QUANTITY OF OUR EDUCATION EFFORT AND THE QUALITY AND QUANTITY OF ALL OTHER SOCIAL, SCIENTIFIC AND INDUSTRIAL ACTIVITIES.

THE PROCESS OF WINNING SUPPORT FOR HIGHER AUTHORIZATION AND APPROPRIATION LEVELS MUST BEGIN INTERNALLY WITHIN THE EDUCATION COMMUNITY. CAN WE AGREE ON PRIORITIES? CAN WE AGREE ON THE NEED FOR A GREATER SENSE OF URGENCY IN MEETING CERTAIN CRITICAL EDUCATION NEEDS? CAN WE FORGE MEANINGFUL SYSTEMS OF ACCOUNTABILITY TO COMBAT ACADEMIC APATHY AND ACADEMIC CORRUPTION? CAN WE CORRECT OUR OWN SHORTCOMINGS IN THE AREAS OF COMMUNICATION AND CROSS-COORDINATION; ELITISM AND SCHOLAR TRIBALISM? AND FINALLY, TO DOUBTING DECISION MAKERS, CAN WE PLEDGE TO ACHIEVE MEANINGFUL RESULTS IF OUR EFFORTS ARE ADEQUATELY FUNDED?

PERHAPS THE LONG OVERDUE NEW INITIATIVE OF THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT WHICH PROPOSES TO FUND A CENTER ON THE STUDY OF THE EDUCATION OF DISADVANTAGED STUDENTS CAN BE UTILIZED AS A LIGHTENING ROD TO OPEN A NEW ERA OF ADEQUATE FUNDING FOR CRITICAL PROBLEMS. PERHAPS THE LIMITED AMOUNTS PRESENTLY BEING PROPOSED FOR SUCH A CENTER SHOULD BE USED TO FINANCE INDEPENDENT RESEARCH ON THIS URGENT TOPIC, AND TO DEVELOP THE MASTER PLAN FOR A RESEARCH CENTER WORTHY OF THE TASK TO BE FUNDED AT A MUCH HIGHER LEVEL IN THE NEXT FISCAL YEAR. PERHAPS ADDITIONAL FUNDS SHOULD BE MADE AVAILABLE FOR EXISTING CENTERS, LABORATORIES, AND INFORMATION BUREAUS WHICH JOIN THE EFFORT TO ESTABLISH SUCH A PIVOTAL

CENTER BY OFFERING TO COLLABORATE WITH EACH OTHER AND WITH INDEPENDENT RESEARCHERS ON ACTIVITIES WHICH ARE RELEVANT TO THE ACHIEVEMENT OF THE GOALS OF THE CENTER.

AND FINALLY, PERHAPS WE CAN MAXIMIZE AN EFFORT TO REACH OUT TO THE PRIVATE SECTOR FOR ITS CONTRIBUTION TOWARD THE VERY AMBITIOUS BUT WORTHWHILE GOAL OF IMPROVING OUR EFFORTS TO EDUCATE DISADVANTAGED STUDENTS. PUBLISHERS, CONSULTANTS, COMPUTER MANUFACTURERS, AND OTHERS, SHOULD BE VIGOROUSLY RECRUITED. AND BEYOND THE SPECIAL THRUST TO LAUNCH THIS NEW CENTER, THE PRIVATE SECTOR SHOULD BE INVITED TO BE AN ONGOING PARTNER WITH THE FEDERAL GOVERNMENT IN THE NATION'S OVERALL RESERACH AND DEVELOPMENT MISSION. THE EXPLORATION OF NEW WAYS TO STRUCTURE SUCH A PARTNERSHIP -- POSSIBLY EVEN A "QUANGO" -- IS AN ITEM OF GREAT INTEREST TO THE SUBCOMMITTEE ON SELECT EDUCATION. WE ARE ANXIOUS TO HEAR NEW IDEAS AND PROPOSALS.

IT IS FITTING TO BEGIN THIS SET OF HEARINGS BY QUOTING FROM THE LEGISLATION THAT FOUNDED THE NATIONAL INSTITUTE OF EDUCATION, LANGUAGE STILL PRESERVED UNDER CURRENT LAW GOVERNING THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT (OERI):

"THE CONGRESS DECLARES IT TO BE THE POLICY OF THE UNITED STATES TO PROVIDE EVERY INDIVIDUAL AN EQUAL OPPORTUNITY TO RECEIVE AN EDUCATION OF HIGH QUALITY REGARDLESS OF RACE, COLOR, RELIGION, SEX, AGE, HANDICAP, NATIONAL ORIGIN, OR SOCIAL CLASS. ALTHOUGH THE AMERICAN EDUCATIONAL SYSTEM HAS PURSUED THIS OBJECTIVE, IT HAS NOT ATTAINED THAT OBJECTIVE. INEQUALITIES OF OPPORTUNITY TO RECEIVE HIGH QUALITY EDUCATION REMAIN PRONOUNCED. TO ACHIEVE THE GOAL OF QUALITY EDUCATION REQUIRES THE

CONTINUED PURSUIT OF KNOWLEDGE ABOUT EDUCATION THROUGH RESEARCH, IMPROVEMENT ACTIVITIES, DATA COLLECTION AND INFORMATION DISSEMINATION."

THE ENABLING LEGISLATION, WHILE ACKNOWLEDGING THE RESPONSIBILITY OF THE STATES AND LOCAL GOVERNMENT IN THE AREA OF THE NATION'S SCHOOLING, MAKES CLEAR THE CENTRAL MISSION OF THE FEDERAL RESEARCH DEVELOPMENT AND DISSEMINATION ENTERPRISE. THESE HEARINGS WILL BE AN EFFORT TO DETERMINE HOW FAR WE ARE FROM REACHING THE CENTRAL GOAL OF REDUCING INEQUALITIES OF OPPORTUNITY. TO WHAT EXTENT IS THE PRESENT STRUCTURE OF OERI ADEQUATE TO THE CHALLENGE OF MEETING THESE HISTORIC GOALS? HOW HAVE RESOURCES BEEN DIRECTED TO MEET THE ECUCATIONAL RESEARCH NEEDS OF THE NATION, AND HAVE THEY BEEN USED EFFICIENTLY AND EFFECTIVELY? WHAT PROGRESS HAS BEEN MADE IN THE FIFTEEN YEARS SINCE THE DEPARTMENT'S FOUNDING AND THE TWO DECADES OF WORK CARRIED OUT BY THE LEGISLATIVELY OLDER LABS AND CENTERS? THESE QUESTIONS MAY BE COMPLEX, BUT THEY HAVE NEVER BEEN MORE URGENT, GIVEN THE BLEAK ASSESSMENTS OF THE NATION'S SCHOOLS THAT HAVE BEEN MADE CONTINUOUSLY SINCE THE PUBLICATION OF THE LANDMARK 1983 REPORT A NATION AT RISK.

WE CONTINUE TO EXIST WITHIN AN EDUCATIONAL CRISIS, ONE MARKED BY DECAYING INNER-CITY SCHOOLS, UNACCEPTABLE DROPOUT RATES OF AS MUCH AS FIFTY PERCENT IN OUR MAJOR URBAN CENTERS, AND DECLINING LEVELS OF ACHIEVEMENT, PARTICULARLY WHEN WE COMPARE AMERICAN STUDENTS TO THOSE OF OUR LEADING INDUSTRIAL COMPETITORS. THE COSTS TO SOCIETY ALONE WOULD FORCE US TO COME UP WITH CREATIVE SOLUTIONS TO THE PROBLEMS OF WELL OVER HALF A MILLION DROPOUTS EACH YEAR.

THE SOCIAL COSTS OF ONE DROPOUT IS APPROXIMATELY $4,6000 A YEAR IN HGIHER SOCIAL SPENDING AND LOST TAXES. EACH CLASS THAT DROPS OUT COSTS THE ENTIRE NATION APPROXIMATELY $240 BILLION DOLLARS. WHERE IS THE

FEDERALLY SPONSORED RESEARCH TO OFFER US THE HOPE THAT THIS STATE OF AFFAIRS CAN BE CORRECTED?

IN THE EARLY 1960'S THE PERRY PRE-SCHOOL PROJECT, DEVELOPED IN YPSILANTI, MICHIGAN WITHOUT FEDERAL SUPPORT, SHOWED US THAT BY OFFERING A PRE-SCHOOL PROGRAM TO THREE-YEAR-OLDS FROM POOR HOMES A DIFFERENCE COULD BE MADE. THE CHILDREN WHO WERE PROVIDED WITH THE EXTRA ONE OR TWO YEARS OR EARLY SCHOOLING GRADUATED FROM HIGH SCHOOL AND WENT ON TO JOBS AT TWICE THE RATE OF CHILDREN WHO DID NOT BENEFIT FROM THAT EARLY INTERVENTION. THE CAREFUL WAY THAT LONGITUDINAL STUDY WAS ORGANIZED BUILT UP A POWERFUL MOMENTUM FOR FEDERAL INTERVENTION WHICH HELPED PAVE THE WAY FOR THE HEAD START PROGRAM. IN THESE HEARINGS WE WILL BE ASKING WEHRE THE RESEARCH IS THAT CAN EFFECTIVELY DEMONSTRATE TO CONGRESS NEW SOLUTIONS TO EDUCATING DISADVANTAGED CHILDREN.

WHILE THE U.S. SPENDS A LARGER PERCENTAGE OF ITS GNP ON EDUCATION THAN JAPAN, ONLY SEVENTY-THREE PERCENT OF OUR STUDENTS RECEIVE A DIPLOMA, AS OPPOSED TO NINETY-EIGHT PERCENT OF JAPANESE HIGH SCHOOL STUDENTS. CONFRONTED WITH A POSSIBLY SEVERE LABOR SHORTAGE AT THE BEGINNING OF THE NEXT CENTURY, PARTICULARLY OF HIGHLY SKILLED WORKERS, WE FACE MORE THAN JUST HIGHER SOCIAL COSTS IF WE FAIL TO ADDRESS THE PROBLEM OF DISADVANTAGED AND "AT RISK" STUDENTS. OUR CAPACITY TO COMPETE EFFECTIVELY IN THE NEW WORLD ECONOMY IS ALSO JEOPARDIZED, AND SO IS OUR ABILITY TO RETAIN OUR TECHNOLOGICAL EDGE WHEN AMERICAN STUDENTS COME NEAR THE BOTTOM IN INTERNATIONAL COMPARISONS OF SCIENTIFIC ACHIEVEMENT. WE ARE TOLD THAT THE SOVIET'S LAUNCHING OF THE SPUTNIK SATELLITE IN THE 1950'S JOLTED AMERICAN SCIENTIFIC EDUCATION INTO RAPID AND INNOVATIVE CURRICULUM DEVELOPMENT. WHAT HAS OERI DONE TO STIMULATE THE NEW KINDS OF CURRICULUM DEVELOPMENT THAT MUST TAKE PLACE, GIVEN THE DISTURBING

CONCLUSIONS OF THE INTERNATIONAL EDUCATION ASSOCIATION (IEA) WHOSE CHAIRMAN WILL TESTIFY THIS MORNING?

THE UNITED STATES RANKS FORTY-NINTH AMONG ONE HUNDRED EIGHTEEN NATIONS IN LITERACY LEVELS. TWENTY-FIVE MILLION AMERIAN ADULTS CANNOT READ THE HEADLINES OF A DAILY NEWSPAPER. FIFTEEN PERCENT OF RECENT GRADUATES READ AT LESS THAN A SIXTH GRADE LEVEL. ONE MILLION TEENAGERS BETWEEN AGES TWELVE AND SEVENTEEN CANNOT READ ABOVE THE THIRD GRADE LEVEL. IN THIS CONTEXT, IT IS NECESSARY TO WONDER WHAT RESEARCH DATA INFORMED SECRETARY BENNETT'S DECISION TO CUT NEARLY $17 MILLION DOLLARS IN FUNDING FOR THE LITERACY TRAINING FOR HOMELESS ADULTS AND WORKPLACE LITERACY PARTNERSHIPS PROJECT IN NEXT YEAR'S FY '89 BUDGET PROPOSALS. IT IS A NATIONAL SCANDAL THAT A SOCIETY THAT PURPORTS TO CALL ITSELF COMMITTED TO EQUAL EDUCATION CANNOT TEACH ALL OF ITS CITIZENS TO READ AND WRITE.

IN THESE HEARINGS, WE MUST QUESTION THE ADMINISTRATION'S COMMITMENT IN SO MANY OF THESE AREAS TO RESEARCH DESIGNED TO HELP EDUCATE ALL OF THE NATION'S CHILDREN. THE DEPARTMENT'S VIEW OF EDUCATION RESERACH APPEARS TO BE, UNFORTUNATELY, YET ANOTHER ADMINISTRATION EFFORT TO ALLOW FORM TO TRIUMPH OVER SUBSTANCE. INSTEAD OF ACTING WITH THE KIND OF URGENCY IT SHOULD ON SOME OF THE KEY EDUCATIONAL PRIORITIES EVIDENT TO MOST AMERICANS, SUCH AS THE NEEDS OF "AT RISK" CHILDREN, THE PROBLEMS OF ILLITERACY AND SCIENCE EDUCATION, OERI'S POLICIES HAVE MADE IT MORE DIFFICULT TO ATTRACT THE KINDS OF RESOURCES NECESSARY TO TACKLE THE REAL JOB AT HAND.

THE RECORD OF THIS ADMINISTRATION IN THE YEARS BEFORE THE ASSISTANT SECRETARY TOOK OFFICE HAS BEEN WELL DOCUMENTED BY A RECENT GAO REPORT, EDUCATION INFORMATION: CHANGES IN FUNDS AND PRIORITIES HAVE AFFECTED

PRODUCTION QUALITY. THE AUTHOR OF THAT DOCUMENT WILL BE TESTIFYING BEFORE US TODAY. AS THAT REPORT MAKES CLEAR, SHIFTS AWAY FROM BASIC RESEARCH GATHERING BETWEEN 1980 AND 1985 TOWARDS DISSEMINATION HAVE WORKED TO UNDERMINE THE RESEARCH ENTERPRISE ACROSS THE ENTIRE DEPARTMENT OF EDUCATION.

IN THE AREA OF SPECIAL POPULATIONS, READING AND WRITING INFORMATION GATHERING DROPPED DRAMATICALLY. FOR EXAMPLE, IN 1980 THERE WERE FORTY AREA STUDIES COMMISSIONED IN THE AREA OF READING AND WRITING; IN 1985 THERE WERE TWO.

INSTEAD OF HELPING TO COALESCE AND COORDINATE AN ALREADY FRAGMENTED SYSTEM OF LABS AND CENTERS IN ADDITION TO DISSEMINATION AGENCIES SUCH AS ERIC, THE ADMINISTRATION HAS SOUGHT TO FRAGMENT THE SYSTEM EVEN FURTHER BY FUNDING AN ENTIRELY NEW SERIES OF "MINI-CENTERS." USING SOME DOUBTFUL LEGISLATIVE AUTHORITY FOUR AWARDS HAVE BEEN MADE FOR STUDIES IN THE CONTENT AREAS. THEIR RATIONALE MUST BE QUESTIONED WHEN WE NOW HAVE TWO DIFFERENT CENTERS STUDYING THE ELEMENTARY SCHOOL, ONE MAJOR CENTER AT JOHNS HOPKINS UNIVERSITY IN BALTIMORE STUDYING EFFECTIVE ELEMENTARY SCHOOLS AND A NEW "MINI-CENTER" DEVOTED TO ELEMENTARY SCHOOLS SUBJECT AREAS AT MICHIGAN STATE UNIVERSITY IN EAST LANSING. DUE TO CONGRESSIONAL PRESSURE THE ADMINISTRATION WAS PREVENTED FROM DEFUNDING EVEN FURTHER AN EXISTING SYSTEM OF SIXTEEN ERIC CLEARINGHOUSES, IN AN EFFORT TO DEVELOP SOME NOT VERY WELL THOUGHT OUT NEW PROPOSALS.

IN HIS LAST YEAR IN OFFICE, THE ASSISTANT SECRETARY HAS BEEN CONVINCED OF THE NEED TO ADDRESS THE PROBLEM OF THE DISADVANTAGED, FROM THE SAFETY OF FISCAL YEAR 1989. YET THE PROPOSED "MINI-CENTER" CONTINUES TO REFLECT THIS ADMINISTRATION'S LACK OF UNDERSTANDING AND BASIC INSENSITIVITY TO MINORITY ISSUES. OERI HAS SOUGHT TO DAMAGE THE

CREDIBILITY OF THE PROJECT FROM ITS INCEPTION BY INCORPORATING WITHIN THE PARAMETERS FOR STUDY, BILINGUAL RESEARCH. THIS FIELD OF INQUIRY REQUIRES SEPARATE INSTITUTION STAFF AND RESOURCES. CONGRESS MANDATED SUCH A SPECIAL EMPHASIS UNDER TITLE VII OF THE ELEMENTARY AND SECONDARY SCHOOL ACT FOR BILINGUAL EDUCATION. IN AN EFFORT TO CIRCUMVENT THE WILL OF CONGRESS, THE ADMINSITRATION IS IN THE PROCESS OF TERMINATING A KEY BILINGUAL EDUCATION CENTER AND TRANSFERRING ITS FUNCTIONS TO THE PROPOSED CENTER ON THE DISADVANTAGED. NEARLY AS OUTRAGEOUS IS THE ASSISTANT SECRETARY'S OMISSION OF LEADING MINORITY RESEARCHERS IN HELPING TO FRAME THE NATURE OF THE CENTERS' MISSION.

WHAT CAN BE DONE TO CHANGE THIS STATE OF AFFAIRS? WE NEED TO USE THESE HEARINGS TO CAREFULLY EXAMINE HOW WE MAKE THE EXISTING STRUCTURE INSIDE OERI AND THE NETWORK OF LABS AND CENTERS MORE RESPONSIVE TO NATIONAL PRIORITIES. FROM A ROUGH SAMPLING OF THE WORK PRODUCED FROM THE LABS AND CENTERS IT IS CLEAR THAT THE EXREMELY MINIMAL EFFORTS BEING CARRIED OUT TO IMPROVE THE EDUCATIONAL EXPERIENCE OF "AT RISK" AND DISADVANTAGED YOUTH ARE INSUFFICIENT. ONE "MINI-CENTER" DEVOTED TO THIS ISSUE IS NOT ENOUGH; WE NEED AT LEAST ONE MAJOR RESEARCH INSTITUTE WORKING WITH A MANHATTAN-PROJECT LIKE INTENSITY TO DEVELOP SOLUTIONS FOR PERSISTENT UNDERACHIEVEMENT.

AN ATTEMPT SHOULD BE MADE AT A FULLY INTERDISCIPLINARY APPROACH. USING THE BEST RESEARCHERS FROM THE FIELDS OF SOCIAL SCIENCES, HEALTH, AND COGNITIVE PSYCHOLOGY, WORKING TOGETHER WITH EDUCATIONAL RESEARCHERS AND PRACTITIONERS WHO HAVE KNOWLEDGE OF THE REALITY OF URBAN SCHOOLS, WE CAN FIND THE KINDS OF TEACHERS, SCHOOL LEADERSHIP, COMMUNITY INVOLVEMENT AND CURRICULA THAT ACCOMPLISH MEANINGFUL RESULTS.

MECHANISMS ALSO NEED TO BE DEVELOPED WHEREBY WE CAN LEVERAGE THE

MORE SIGNIFICANT RESOURCES SUCH A RENEWED EFFORT WILL CONSUME. WE SHOULD LOOK AT THE KINDS OF PUBLIC-PRIVATE PARTNERSHIPS THAT A RESEARCH AGENCY SUCH AS THE MANPOWER DEMONSTRATION RESEARCH CORPORATION (MDRC) EXEMPLIFIES.

MDRC PRODUCES UNDER CONTRACT WITH THE FEDERAL GOVERNMENT CAREFULLY EVALUATED STUDIES WHICH, LIKE THE PERRY PRE-SCHOOL PROJECT REFERRED TO EARLIER, HAVE THE CAPACITY TO EFFECT REAL AND POSITIVE CHANGES IN PUBLIC POLICY.

MDRC MAY NOT BE THE ONLY MODEL OF SUCH PARTNERSHIPS THAT MIGHT BE DEVELOPED. WHAT WE NEED ABOVE ALL IS THE COMMITMENT TO INVOLVE ALL SECTORS OF SOCIETY IN THE VITAL RESEARCH ENTERPRISE AND HELP TO COORDINATE THEIR EFFORTS; WE NEED, FOR EXAMPLE, EDUCATIONAL RESEARCHERS BETWEEN PUBLIC SCHOOLS AND BUSINESS SUCH AS THE BOSTON COMPACT. SUCH PARTNERSHIPS NEED TO BE INCORPORATED WITHIN AN EXPANDED VISION OF THE ROLE OF RESEARCH AND DEVELOPMENT.

IN SHORT, WE NEED LEADERSHIP. THE NEXT ADMINISTRATION, WHATEVER ITS POLITICAL PERSUASION, WILL UNDOUBTEDLY WANT TO MAKE EDUCATION "A PRIORITY." SUCH A POLICY WILL BE IN ACCORD WITH PUBLIC OPINION SURVEYS WHICH SHOW THAT THE AMERICAN PEOPLE RANK SPENDING ON EUDCATION ABOVE POURING MONEY INTO THE BOTTOMLESS DEFENSE BUDGET. IT IS ALSO CONSISTENT WITH THE RECOMMENDATIONS OF A WHOLE HOST OF BLUE RIBBON COMMISSIONS WHICH HAVE COMMENTED ON THE CURRENT CRISIS. WITHOUT EXCEPTION, THESE COMMISSION REPORTS HAVE ADVOCATED INCREASED FEDERAL SPENDING ON THE NATION'S PUBLIC SCHOOLS. HOWEVER, UNLESS WE HAVE THE KINDS OF RESEARCH NECESSARY TO SHOW HOW TO EFFECTIVELY SPEND THE MONEY THAT WILL UNDOUBTEDLY FOLLOW FROM THE WAVE OF RHETORIC, WE MAY WELL FIND OURSELVES NO BETTER OFF.

THE KEY TO OUR FUTURE PRODUCTIVITY AND SURVIVAL AS A NATION RESTS ON EDUCATION AND THERE CAN BE NO BETTER INVESTMENT IN THAT FUTURE THAN EDUCATIONAL RESEARCH. IT IS TO THIS SIMPLE PROPOSITION THAT THESE HEARINGS ARE DEDICATED.

Mr. **Bartlett**. Thank you, Mr. Chairman. I don't know which of these microphones to use, but let me borrow yours for a second.

Mr. Chairman, I want to begin by commending Chairman Owens, the chairman of this subcommittee, for holding these 2 days' worth of oversight hearings on the Office of Educational Research and Improvement. This is the first time, I am told, since the creation of labs and centers some 20 years ago, that the Congress has held oversight hearings on their activities. Labs and centers are the primary research instruments conducting educational research, and I am particularly interested in hearing how their research reaches the average teacher and student in the classroom. Let me correct that. Labs and centers are the primary Federal instruments conducting that research.

Now in particular I want to commend Chairman Owens for his bipartisan approach and the bipartisan approach of this subcommittee to this issue. Education is not an issue in which there are divisions either between the parties or between philosophies or between the legislative and the executive branch. It is an area in which there are differences and there are issues as we try to find the truth, but the issues over academics and accountability, curriculum and excellence in education, know no partisan bounds.

It is my hope and belief that this subcommittee will explore the questions on educational research in depth and will ask questions and determine, then, the truth as to where we go from here. Through this hearing, the subcommittee hopes to learn what the Federal role should be in sponsoring educational research and to what extent the Nation's research agenda reflects America's key educational priorities. It seems to me that the Federal Government does have a legitimate and a necessary role in educational research, particularly in collecting data on educational accomplishments as well as areas in which improvements in education are needed.

One of the issues that I will be focusing on today is whether a more balanced and a more productive approach can be determined in distributing Federal dollars in the educational research field. Currently, OERI puts nearly all of its research funds into labs and centers. While these institutions may well be appropriate to examine certain research questions, I think this subcommittee has to ask the question and must examine other mechanisms which will allow individual researchers to contribute more to educational research.

Another issue I am particularly interested in is in dissemination of educational research. It is my intent to find ways to improve the dissemination of educational research so that the third grade teacher in Del Rio, TX, or in Brooklyn, NY, can benefit from the research that is being done.

Chairman Owens and I come to this hearing in the bipartisan manner I spoke of earlier, to determine what changes need to be made that will improve the state of educational research in this country. It is my hope that these hearings will provide suggestions for improvements and possibly for new approaches regarding the organization of Federal efforts in educational research, the funding of those efforts, and in other related areas which affect the quality of instruction in our schools.

Now, as is too often the case in the Congress, the hearings are being conducted, by the luck of the draw, simultaneously with a variety of rather significant legislation on the House floor that also involves the Education and Labor Committee, both on the House floor and in the Rules Committee. I do look forward to the full 2 days of hearings. I will be present for most of those but from time to time, along with other members of the subcommittee, I will have to be elsewhere on the House floor.

I do want to say to the distinguished witnesses that the testimony that I have seen is quite good. I look forward to hearing the testimony, to reading the testimony. Much of it I have already been able to review, and I believe that these hearings will give the subcommittee the direction that we need to make the necessary changes at the Federal level in educational research.

I thank the chairman for the time.

Mr. OWENS. I yield to Mr. Williams for an opening statement.

Mr. WILLIAMS. Thank you, Mr. Chairman.

I am intrigued by this proposal of a "quango." I read the New York Times editorial of last August, and it was not the first time I had seen a proposal for a quango and I tend to be supportive of what I know of those proposals. However, the Times editorial did elicit a negative response from me because it indicated, as I recall, that quangoes were needed because we needed more research about our failed system of public education. I tend to think a better reason for a quango is to research how we have succeeded as well as we have with our system of public education, and then share that not only with schools and instructors who aren't doing as well as they might, but also share it with other nations in the world who are not—with few exceptions—up to our standards.

The Times editorial said this, quoting: "Cities and States, with help from Washington, are spending billions on schools, yet students aren't learning." Well, there are some segments of our population, particularly some segments of minority Americans living in certain places, that aren't doing as well as we would like but are doing better than they did in the early 1960's and previous to that time. They are doing better than they once did, but we still aren't doing well enough. We ought to research what are we doing that has improved education for certain segments of Americans during the past quarter of a century, and how can it be even better.

There is also the teaching of certain disciplines in the United States that, if one accepts certain measurements in comparison with other nations, we find that we may be falling somewhat behind in the standard achievement scores of Americans' learning in those disciplines versus the learning of other students in other nations in those same disciplines. I am thinking particularly about the sciences.

So we do need research on both our failings and particularly on our successes and, as my colleague from Texas knows, he and I have been in agreement for a long time, and particularly when I was chairman of this subcommittee, with the fact that good research should improve practice in the classroom. That is the purpose of good research. In the end, it ought to mean better teaching and improved learning, and I know under the guidance of Chairman Owens this subcommittee will move to try to do what we can to encourage such research.

Thank you, Mr. Chairman.

Mr. **Owens**. Because of the broad impact of the nature of the subject we are dealing with, all the members of the Education and Labor Committee were invited to join us for the hearing, and I see Mr. Charles Hayes of Illinois is here. I want to welcome Mr. Hayes and ask him if he has an opening statement.

Mr. **Hayes**. Thank you, Mr. Chairman, but my presence here, as you said, indicates an interest. I am vitally concerned about the direction that we are going, in terms of trying to maintain our public educational system. I think under your leadership we might be able to change our direction, where we put so much money into defense, and one of the best defenses that this Nation can have in my opinion is to educate its young, but we aren't going in that direction. I hope through research we might be able to influence some change—after November, though.

Mr. **Owens**. Thank you.

Our first panel is Mr. Michael Timpane, president, Teacher's College, Columbia University; Nathaniel M. Semple, Committee for Economic Development; James S. Coleman, National Opinion Research Center; Dr. Faustine Jones-Wilson, the Bureau of Educational Research, School of Education, Howard University; and Dennis Doyle, a senior fellow of the Hudson Institute.

Will you please take your seats? I think you are all veterans of this procedure and quite familiar with how we operate. We have copies of your testimony, and your prepared statements will be inserted immediately following your oral presentations. We would like for you to just dwell on points which you would like to highlight, and you can elaborate in the question and answer period afterward.

We hesitate to limit the time of such a distinguished panel, but we would like you to know we have a 7-minute warning—not warning, but indicator to let you know you have talked 7 minutes—but take the time you feel is necessary to finish, round out your thoughts. Why don't you begin, Mr. Timpane?

STATEMENT OF P. MICHAEL TIMPANE, PRESIDENT, TEACHER'S COLLEGE, COLUMBIA UNIVERSITY

Mr. **Timpane**. Thank you, Mr. Chairman, Congressman, Bartlett, Congressman Williams, Congressman Hayes. It is a pleasure to be here. I am the president of Teacher's College, Columbia University. I was director, deputy director of the National Institute of Education at an earlier time, and have been involved in these discussions for a couple of decades.

It is a particular pleasure to congratulate you on holding these hearings, and perhaps if I say it, take a moment of my time, there will be 30 or 40 others who may not have to say it at such length. It is little short of thrilling to have a hearing on educational research be begun on such a positive note and with such a keen sense of the stake which the Nation's future has in our successful address of this problem.

Having said that, I would like to make just four points, and very briefly, based on but not repeating my testimony. The first is that the opportunity offered is a matter of great urgency. We have made education an issue of the first rank in this Nation in the last 4 or 5 years. We have made significant strides in many areas but we have discovered, I believe, problems in our schools, particularly in some of our urban schools, which are far more serious than we dreamed when we started. So while there are ways in which we should be pleased with our progress, it seems to me we have discovered problems of an even greater magnitude than we thought, and the issue is urgent.

The issue is particularly urgent, it seems to me, by the testimony of the business community, which I am sure you will hear from Mr. Semple in a few moments of their growing conviction of the absolute stake that the Nation has in the future success of our schools, and the role that research has to play in that. They bring a particular cognizance, I believe, of the necessity of investment in research, from their own experience.

Certainly Mr. Kearns, the president of Xerox Corp., has spoken eloquently on this, as have other business leaders. They cannot imagine an enterprise succeeding in the long run which does not make substantial investment in research, and they speak of numbers like 1 and 2 percent of expenditures as the minimum that successful enterprises spend on research. The American educational enterprise does not spend a fraction of 1 percent of its total on research, and I think that is a very important perspective that the business community in particular has brought.

Secondly, I hope that these hearings are the occasion, as I said in my testimony, to clear away what I think is a checkered and unhappy political history of educational research, and that we can just face that history and understand it a bit and move on from it. I have always been struck by a quote that a distinguished Congressman, Daniel Flood of Pennsylvania, the late Congressman Flood, formerly chairman of the Labor and Public Welfare Subcommittee of the Appropriations Committee, made in 1970, and it was a prophetic statement. It is very short, and I will read it.

He said this to educational researchers gathered at a table like this 18 years ago. He said,

> Since the Russians fired Sputnik, there has been no horizon to research of all sorts and kinds, and it is just too bad that you fellows should come in at the tail end of this thing, after a generation of research being the word and the thing. Now you come limping in at the end of this thing all steamed up about research, after everybody else is beginning to slacken. It's just a burden you are going to have.

He said that in 1970, and that is as fair a summary of what actually happened in the succeeding 18 years of educational research as I know of. You will hear more of the lurid details, but I think that that is simply the case, and has been. I hope that we can use these hearings as the time to stop limping, in Congressman Flood's words, and move forward.

The third thing I would like to do is to begin to identify, as many others will after me, I am sure, the clear if limited benefits that have already been generated by our investment in educational research, and they are in my judgment very clear. I have mentioned a few in my testimony. If we were to look at four or five of the principal issues gripping American education today, in each of them we can identify contributions educational research has already made.

In literacy and reading, it was the National Institute of Education over a decade ago which focused the research community in forging a national consensus about effective and appropriate ways to teach basic reading skills and to move ourselves along to the more complicated questions of comprehension and of critical thinking, and I believe that the success of our Nation's schools reflects that.

In school improvement and effectiveness, it was federally supported research on school organization and implementation of Federal programs which was really the single most important source of information for what has become known as the effective schools or the school improvement movement. The insight of the critical significance of the behavior of the local school building and the people in it, in whether or not any of the bright ideas we had at the national level really worked, came from research begun painstakingly 15 years ago.

Similarly, in bilingual education and in testing, while the issues still rage in those areas, the Federal Government has been an extremely important contributor of new research information.

Finally, in the area of school finance, my colleague Dennis Doyle at the end of the table knows better than I that the Federal Government played an instrumental role in developing the research which undergirded the school finance reforms which were most prominent in the mid to late 1970's. They have petered out in this decade to some extent, but I believe that they have put school finance on a new scientific footing.

I believe those are considerable accomplishments, and they talk about the real issues that face people in our schools.

And finally, I would urge the committee and all of my colleagues testifying today that our job is precisely as you have stated it, and that is to develop a clear and simple perspective and strategy for educational research to go forward in the future. I believe we need a few priorities, clearly expressed.

My suggestions are very similar to Mr. Williams' and to your own, Mr. Chairman, and that is that the education of poor minority youngsters is the single most important problem facing us, and we should organize at least an important part of our educational research enterprise around that enduring and most difficult issue. We should construe it very broadly, not narrowly in the schools. It is a problem much broader than the schools.

Secondly, we must have a mixed or a balanced portfolio of enterprises. As Mr. Barrett suggested, we need to fund both institutions doing research—my institution has one of the research and development centers, and I am proud of what it does—but we must also have resources to fund individual researchers. We cannot put all of our eggs in the institutional basket, nor all of our eggs in the basket of individuals in the academy. We must be able to fund both. Good ideas come from both sources.

We must have a balance between research on the one hand and communications and synthesis activities on the other. I would like on this occasion to acknowledge the important contributions one of my successors, Assistant Secretary Finn, has made in that realm of research. He has taken very seriously the Federal Government's responsibility for synthesis and for communication. We don't have to agree with his every conclusion, to agree with his strategy of putting a lot of our resources into communicating research to the people who need to know it.

Finally, we must—and I believe this is the most appropriate step which the Congress is taking at this very moment, and that is—strengthen the statistics function as a companion to research. It is only on a clear and shared basis of what is the case in our American educational system—what is the case with respect to achievement, what is the case with respect to the resources and circumstances of the school—only when we all understand that, and only a strong statistics function can give us that, can we begin to understand how specific research findings can feed into that system and begin to improve schools.

I think once we have those issues resolved, a few significant strategies, a balanced program of activities, then the other issues of how to organize for it, in terms of how should OERI be organized, whether or not a quango—I am not sure of the pronunciation—is an important part of that, whether or not we should perhaps have set-asides in mission oriented programs, which is certainly a way in which research and evaluation is funded in many realms, those issues I think will then become obvious to us, once we know our priorities and we know the basic activities we have to carry forward.

Thank you very much for the opportunity to be with you.

[The prepared statement of P. Michael Timpane follows:]

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Committee on Education and Labor
U.S. House of Representatives

P. Michael Timpane
President, Teachers College, Columbia University

April 20, 1988

Chairman Owens, members of the Committee, my name is Michael Timpane. I am the president of Teachers College, Columbia University. I have served previously as the director and deputy director of the National Institute of Education, and as the director of education planning for the Department of Health, Education, and Welfare. I have also worked in such research institutes as the Brookings Institute and the Rand Corporation. I have, thus, in one way or another, been deeply involved in the federal educational research enterprise for the past two decades, in trying to create the federal institutional structure, in developing and executing research plans for federal funding, and, occasionally, in competing for federal research resources and performing research under federal grants and contracts.

Let me begin my remarks by congratulating this panel on its decision to hold these hearings. From my perspective, the many reform reports and proposals have made substantial use of perspectives and evidence from educational research, and this has caused political and legislative opinion about educational research to shift gradually and favorably over the past several years, even when there was considerable political turmoil associated with specific agendas and processes. It is my hope that one of the first effects of these hearings will be to acknowledge this changing perspective and thereby put a great deal of historical baggage behind us. We who are deeply concerned with the crucial contributions that better research can make to an improved education for all of our young people must make and take the opportunity these hearings present to build the appropriate structure, make the appropriate plans, and dedicate the appropriate resources to a dynamic federal program of educational research and development.

Educational research has had rough sledding at the federal level for much of the past two decades. Some of the problem was admittedly in the nature of the enterprise. Compared with other realms of research, it is sometimes difficult to see the direct fruits of educational research. The corn does not immediately grow taller, as is the case in agricultural research; disease is not swiftly combatted or life expectancies extended, as in the case of medical research; new inventions do not come forth, as in scientific research; new hardware does not roll off the developmental bench, as in the case of military research. There are, I think, two reasons for this. One is the commonly held critique of educational research--that its theories and methodologies are less rigorous and robust and often produce weak and ambiguous conclusions not related squarely to the everyday problems of schools and students. This criticism is immensely overdrawn in the case of the best educational research being done today. But one need not deny the critique altogether to point to another reason, less obvious, for these invidious comparisons: contrary to popular opinion, research on how people learn and can be more effectively taught is at least as difficult to do as other, more highly favored forms of scholarly or scientific research. It is more difficult in principle to expect dramatic results. The object of educational research is the human being, often in an extremely formative phase, often in a turbulent social and familial context. Learning how to do something deliberately different in the way of curriculum or educational program or teaching behavior, in ways that will certainly and predictably make a difference in the educational achievement of all students--this is a daunting assignment. And yet, this is, directly and indirectly, what educational research is all about. To conclude that educational research ought not to be pursued because it did not, in its early work, succeed widely would be the most misguided of policies. What if we had made such a decision in the early days of this century, when modern research in medicine or agriculture was newly possible? I think the answer is obvious.

The federal educational research enterprise has suffered from unusual political misfortune, which I believe we must review, learn from, and then put firmly behind us. At the outset, support for educational research was bipartisan, especially when, in this House, the efforts of Congressmen Brademas and Quie brought the National Institute of Education into existence. But ever since, matters of partisan or executive-legislative dispute have weakened or dissipated effective political support. Requests for more support for research have been coupled with, and sometimes advertised as substitutes for, more adequate funding for other educational programs. Such requests have often been denounced and rejected. Educational research has also suffered from weak and inconsistent support from its constituencies in the educational associations and colleges and universities. It was rare indeed, until the last few years, that any of the education associations, at either the elementary, secondary, or post-secondary levels, were willing to expend any political capital for the sake of education research, or place it anywhere but near the bottom of their priorities for federal funding.

Being thus inopportune, fragile, and occasionally politically inept, education research has fared poorly in terms of congressional authority and appropriations. The amounts spent today on educational research represent only a modest fraction in real terms of what was being spent ten or fifteen years ago.

And yet, with all of the difficulties it has encountered, I suggest that the federal educational research enterprise has a considerable and surprisingly substantial record of accomplishment. Let me lay this before you very briefly by naming five of the most significant educational policy issues in the nation today, and then sketching the contribution that federally supported educational research has made to their resolution.

Literacy and Reading. Fifteen years ago, the National Institute of Education was instrumental in forging a national consensus about effective and appropriate ways to teach basic reading skills, and demonstrating the necessity to move the research enterprise to the now increasingly important areas of comprehension and critical reading skills.

School Improvement and Effectiveness. Federally-supported research on school organization and the implementation of federal programs was the single most important source of conceptual and empirical information upon which today's most effective strategies for school-based reform are based.

Bilingual Education. Studies in basic and applied linguistics funded by the federal government have provided the conceptual basis for more effective education of all children of language minorities.

Accountability. Federal support of the National Assessment of Educational Progress and other research on testing has undergirded the improved forms of accountability and assessment currently being used in the development of state education reforms and teacher licensing proposals.

School finance. The National Institute of Education pioneered research in school finance equalization, enabling widespread reforms at the state level in the 1970's, and provided the basis for far more sophisticated and effective school finance programs still in use in many states.

This list of accomplishments is itself more than worth the investment made so far.

And where do federal education research activities stand today? Long impoverished, they are now distorted in their purposes, more by the simple lack of resources than by any deliberate twisting of the agenda. What do we have? We have a modest institutional base consisting mostly of the regional educational laboratories and university research and development centers, supplemented by the network of ERIC Clearinghouses and the National Dissemination Network. The laboratories have been working persistently for the past quarter century to move research closer to practice. The R&D centers at their best have carried out balanced and sustained programs of research over several years time on broad and enduring topics in education (such as teaching, learning, school organization, bilingual education, reading, and testing, among those topics listed above).

What is increasingly and glaringly missing from the mix at this moment is any decent opportunity for individual scholars to find federal support for their work. It is axiomatic in the sponsorship of research programs that there must be a mix of fundamental and applied work, with the former feeding into the latter as time goes along, producing those new insights which then become new tools and techniques, leading eventually to better practice. In the absence of support for individual scholars, we are inevitably depriving ourselves of the fundamental inquiries that will be the kernels, if you will, from which the next generation of applications must grow. We must add resources to support this fundamental work, and to encourage the brightest scholars in many disciplines to bend their interests and talents to solving the vital problems of learning and behavior from which a better education will eventually be built. This cannot be done at the cost of the institutional programs in place, which are already without adequate resources and capacity to feed the educational enterprise from a vigorous and comprehensive program of research.

Let me now turn to two particular questions. First, is a new, quasi-autonomous, non-governmental organization (the QUANGO) the answer to our problems of purpose and organization in educational research? I think not. It may be that such an organization could become a significant part of a new and broader federal commitment to educational research, but it is no substitute for a commitment undertaken at the federal level, in the U.S. Department of Education. We did not make the NSF or the NIH a QUANGO--why should we do the same for education?

Second, what should be the priorities of federal educational research? There are a host of educational problems crying out for better research, but I believe that it would be wise strategy to declare three or four national research priorities of a relatively broad nature and stick with them over a period of years, to put together sustained programs of fundamental and applied research, carried out by individual researchers and by research institutions, and connected systematically over time to the educational institutions and teachers of our nation. My list would start with three priorities:

1. The education of poor and minority youngsters. The distressing problems of our schools in succeeding with these children, the clear-cut demographic trends, and the cries from our economy and society for the necessary contribution of these young people would place this matter at the top of any agenda.

2. Teaching and school reform. Over the the past five years, the states and localities, teacher organizations, and educational associations have put in place a wide-ranging series of reform proposals intended to make the local school more effective and the teaching profession a more important and skillful part of these more effective schools. We are a very

long way from achieving these reforms, and their future progress will depend on continuing research support.

3. Learning. We need continuing investments in studies of how people learn and develop, both in childhood and in adult life. This research must range from basic inquiries concerning human cognition to targeted examinations of how students learn specific subjects, such as mathematics, reading, and languages; and how they garner the skills to have productive and fulfilling lives at work and in society.

Such an agenda leaves out some important areas, but it encompasses eminently national and enduring questions of education in our time. The temptation will be to develop a Christmas-tree agenda that pleases everyone and to lean heavily on applied work that will produce short-term results. Both of these impulses must be held in check. We must concentrate on a few important issues, and we must understand that progress through research on such topics requires a long-run commitment to both fundamental and applied inquiry, and the determination to produce results that will help teachers and students.

Most of all, at this point in the history of educational research, we need your enlightened support.

Thank you for the opportunity to appear before you.

Mr. **Owens**. Thank you.
Mr. Semple?

STATEMENT OF NATHANIEL M. SEMPLE, VICE PRESIDENT AND SECRETARY, RESEARCH AND POLICY COMMITTEE, COMMITTEE FOR ECONOMIC DEVELOPMENT

Mr. **Semple**. Thank you, Mr. Chairman. I, too, appreciate the opportunity to testify today and to be among so many distinguished individuals, who I must suggest probably know much more about the educational research area than I do. However, I would like to take this time to reflect on at least one interested party, the business community, and their reaction to what we learned or did not learn in the available research that led us to our recent conclusions on education policy.

For those of you who are not familiar with the CED, we are comprised of 250 corporate and academic trustees who work together to study and evolve approaches to the Nation's most pressing economic concerns. Our chairman is Edmund Fitzgerald, chairman and chief executive, Northern Telecom, and our vice chairmen include such individuals as Jim Kettleson, the chairman and chief executive of Tenneco; Philip Hawley, the chairman of Carter Hawley Hale; William Woodside of Primerica; and the recently retired chairman of Procter & Gamble, Owen Butler. The CED is an economic think-tank where corporate executives do the thinking, with well researched guidance from the academic and economic communities.

Now the CED's interest in the utility of and application of research is longstanding. Research has underpinned virtually all of CED's work, whatever subject is involved. Now while the CED often engages in primary research, we usually and often have to rely on research provided by others.

Now as you may know, during the past 3 years the CED has released two major studies on education: "Investing in Our Children: Business and the Public Schools," released in the fall of 1985; and our most recent one, this copy of "Children in Need: Investment Strategies for the Educationally Disadvantaged."

Now at the outset of this work, Owen Butler, then chairman of the Procter & Gamble Co., was adamant that we develop our recommendations on the best available evidence. He believed that because business had heretofore enjoyed little credibility on the subject of education, we simply had to make a compelling, factually based case for each of our recommendations.

Mr. Butler also insisted that we set a different standard for the evidence we used. As business people, he reasoned that we could make the biggest contribution by looking on education as an investment and carefully delineating its economic returns, recognizing that this was not all that education pretended to offer but that this was a certain area of return that we felt needed to be documented and understood, at least by the business community. We came to this subject with no preconceived notions.

This turned out to be a much tougher job than we could possibly have imagined. We immediately discovered that, at least as far as we could find readily or at least as far as we could understand—

not to say that it didn't exist—there simply didn't seem to be very much in the area of good analysis between education and economic returns in the available research. We had traditional literature that related economics to productivity, some of which in fact the CED had commissioned several decades ago. But on the programmatic side, the returns on investments in certain kinds of schooling, while they may have been out there, we simply were ignorant of.

Fortunately, we enlisted to do our work an excellent array of academicians, one of whom is on the left and the other of whom is on the right, who oversaw our project and helped us, guided us through this maze—what I would call a blizzard of academic research. One in particular we enlisted, thanks to their advice, was Dan Saks, the professor of education and economics at Vanderbilt. He laid before the committee a rather impressive document which not only surveyed the work in the education area, but clearly delineated programs where there were clear economic returns on educational investment.

Just briefly, the most impressive of these were the outcomes associated with the Perry Preschool Program in Ypsilanti. Now here, in the eyes of the CED committee members, who had long been subject to looking at all kinds of economic returns on investment, both generally and in their own corporations, this was a longitudinally driven analysis based on a rigorous design that met our standards of acceptability.

From an economic viewpoint, we were frankly startled to learn that the single most profitable economic investment our society can make—not only in education, but generally—was not in the kindergarten through high school years but rather in at least one year of very high quality and expensive preschool for disadvantaged children. For a group of business people who were not known for their interest, necessarily, in socially sponsored programs, this came as something of a surprise.

Now after examining the nature of the test and the conclusions we reached, we felt that we knew enough to strongly endorse at least this kind of approach as being one of several that could possibly make a major change in how we were going to deal with the educational and economic problems of the future.

Now we were not satisfied with what we had done at that outset, so we set up a second committee. We found that if 20 years of comprehensive testing had proven that a single year of high quality preschool at the age of 3 could cut later dropout, illiteracy, pregnancy, and crime rates, what else was there? We couldn't duck this—despite some skepticism—duck this question, either. We set up a second committee and we then did the same thing we did in the first committee. We designed a rigorous economic set of standards, and we went out to try to find programs that met them, and the fact of the matter is, we did.

Now once again we had to enlist the academic community to help us along, but we also discovered in the process that the failure to do something about improving the outcomes on education was astronomical. Although we don't necessarily agree with the total numbers, we found some astronomical ones involved, including one figure that it cost the Nation as much as $240 billion in lost earnings over the lifetime of each class of dropouts. These are numbers that are impressive to business people. These are real hard numbers, and I must say that the more we got into it, the more we were impressed by the fact that there did exist hard numbers, and we were also impressed by how hard it was to find them.

We also learned that there were other programs that had returns on investment, either in terms of prenatal care, child immunization, prenatal food supplement programs, and the like. They had substantial returns which we could document, and so as a result, from an economic standpoint alone we determined that the Nation could profit hugely by ensuring that investment in education was done and done adequately and in the right areas.

Now you may wonder what all this has to do with today's hearing on education information and research, and I would argue plenty. As I said, we are not versed on all the ins and outs of education data collection and research. I do know what it did not provide for us. Simply stated, it had not provided documented clear evidence, pro or con, on the economic returns on education. If it did, we needed to know it, and in my feeling it just simply wasn't on the table. If there is any reason why education research may have failed to hold its own in recent years and suffered continual cuts in its budgeting, it is because this link has not been clearly established.

Now I would go on to say that the CED firmly is convinced that it has to be established. It has gone on record with a firm conviction that the Federal role in research is a critically important one, and I will quote directly from our first policy statement on the subject:

> We believe that increased productivity in education over the long term will stem mainly from the application of high quality education research. Accordingly, we recommend that the Federal Government increase the quality and relevance of its education research and data collection through the Department of Education and those organizations with which it works.

This is something we firmly and strongly believe in. We believe without the data, without the information, without the well-designed research, we simply are going to be blowing money and not knowing what we are going to get back from it. We think you can do it.

I will give you one example, one personal example that I am aware of. It had to do with the Youth Incentive Entitlement Program, which I was involved in early on in my previous incarnation on the Hill, and that was to design a set of questions and find some answers to it; to provide enough funding, time, and competence to get those answers.

At that time we were interested, for example, in whether the offer of employment opportunity was, in and of itself, sufficient to encourage young people out of school to return to school. That was one of its primary questions. It was a question that had been around a long time. The MDRC took it out, and I think under the circumstances did a commendable if not outstanding job in trying to find the answers to that and a series of other questions that were clearly laid out. It was a very important question.

I think one of the problems we have in education research is, we don't ask the right questions up front. A lot of this occurs in the economics area, where we don't ask the economic returns on educational research. I think it may be out there but it is not clearly presented.

A second case had to do with all the information that was generated under the YEDPA Program. At the end of 4 years of research, the way it was delivered, as I recall it, it came up in a semi truck 6 feet high, piles of paper and data. For policy development, it wasn't exactly the most practical thing to deal with.

My final comment is that, when the research is done, it needs to be disseminated and written in a manner which people in the business of making policy can understand and can utilize. I think that is one of the major functions that educational research, at least at the Federal level, can do.

In closing, I would like to reassert the conviction that without the information, you can't make policy, and that the role of the Federal Government is to provide the information. It has the resources. It has the competence. It has the capability. I think we need to utilize it more.

Thank you very much.

[The prepared statement of Nathaniel M. Semple follows:]

TESTIMONY

OF

NATHANIEL M. SEMPLE

VICE PRESIDENT AND SECRETARY OF THE

RESEARCH AND POLILCY COMMITTEE

of the

COMMITTEE FOR ECONOMIC DEVELOPMENT

ON

FEDERAL ROLE IN SPONSORING

EDUCATIONAL RESEARCH AND DEVELOPMENT

BEFORE THE SUBCOMMITTEE ON SELECT EDUCATION

COMMITTEE ON EDUCATION AND LABOR

U.S. HOUSE OF REPRESENTATIVES

April 20, 1988

The positions taken in this testimony are partially based on CED's policy statements, Investing in Our Children: Business and the Public Schools (1985), and Childrenin Need: Investment Strategies for the Educationally Disadvantaged (1987). However, the views expressed herein are solely those ofthe author and in no way necessarily represent individual CED trustees or their organizations.

Mr. Chairman,

My name is Nathaniel M. Semple, and I am Vice-President and Secretary of the Research and Policy Committee of the Committee for Economic Development.

For those of you who are not familiar with the CED, we are comprised of over 250 Corporate and academic trustees who work together to study and evolve approaches to the nation's most pressing economic and social problems. Our Chairman is Edmund B. Fitzgerald, Chairman and CEO of Northern Telecom, and our Vice-Chairs are James L. Kettleson, CEO of Tenneco Inc; Philip M. Hawley, Chairman of Carter Hawley Hale; William S. Woodside, Chairman of the Executive Committee, Primerica Corporation; and Owen B. Butler, retired Chairman of the Procter & Gamble Company. In short, the CED is an economic "think-tank" where corporate executives do the thinking, with well researched guidance from the economics community.

The CED's interest in the utility of and application of research is long standing. Research has underpinned virtually all of CED's work, whatever subject is involved. While the CED often engages in primary research, particularly in areas where the Committee feels neither public or private research has produced sufficient information, it often relies on the research of others to help arrive at its policy conclusions.

As you may know, during the past three years the CED has released two major studies on education. Investing in Our Children: Business and the Public Schools, released in the fall of 1985; and Children in Need: Investment Strategies for the Educationally Disadvantaged,, released this past fall. At the outset of this work, Owen Butler, then Chairman of the Procter and Gamble Company and Chairman of the two subcommittees that produced these reports, was adamant that we develop our recommendations on the best available evidence. He believed that because business had heretofore enjoyed little credibility on the subject of education, we simply had to make a compelling factually based case for each of our recommendations.

Mr. Butler also insisted that we set a different standard for the evidence we used. As business people, he reasoned that we would make the biggest contribution by looking on education as investment, and carefully delineating its economic returns, much in the same way as any business looks on a return on investment.

This turned out to be a much tougher job than we could possibly have imagined. We immediately discovered there in the field of education research there simply does not exist very much good analysis on the relationship between education and its economic returns. On its broad relationship, we had the traditional literature, especially the work by Dennison which the CED, in fact, had commissioned nearly two decades ago, which argued a strong connection between education and productivity. On the programmatic side, i.e., the returns of investments in certain kinds of schooling, there was virtually nothing.

Fortunately, we enlisted to do our work an excellent array of academicians who, when charged with this mission performed unexcelled work. Among the papers presented to the subcommittee was one prepared by Dan Saks, who until his recent passing away was Professor for Public Policy Studies at Vanderbilt. In that paper, which has since been reproduced in the Fall 1986 edition of the Peabody Journal of Education, Professor Saks laid before the Committee a well reasoned analysis of not only the literature on the economic returns on educational investment, but pointed to several programmtic examples where the evidence was clear that the investment had direct pay out.

The most impressive of these was the outcomes associated with the Perry Preschool Program in Ypsilanti. Here, in the eyes of the CED Committee members was well documented, long-term, longitudinally driven analysis based on a rigorous design that met all our standards of acceptibility.

Frankly, from an economic viewpoint, we were frankly startled to learn that the single most profitable economic investment our society could make in education was not in the kindergarten through high school years, but rather in at least a year of very high-quality and expensive pre-school for disadvantaged children beginning at the age of three. At the beginning of our work, most of us were simply ignorant of the fact that this was not just a theory, but a thoroughly and scientifically tested conclusion based on more than twenty years of testing. After examining the nature of the test and the conclusions reached, we concluded that we knew enough to strongly endorse the institution of this kind of program for every disadvantaged child in the United States on the fastest practical timetable. We included that recommendation in our original policy statement in 1985, and it became one of the major points of difference between CED's policy statement and the numerous other recommendations about public education which were being made by other groups. Happily, this advice has not fallen on deaf ears, and the movement toward more universally available high-quality pre-school for disadvantaged children has gained a great deal of additional momentum during the last two years.

But we at CED were not at all satisfied with what we had done. We had left an obvious, and perhaps critically important, question unanswered: "If twenty years of comprehensive testing has proven that a single year of high quality pre-school at the age of three can cut later dropout, illiteracy, pregnancy and crime rates for the affected group by somewhere between a third and a half, what other forms of early childhood support would have equally or more dramatic effects?" Was it possible that we already knew how to break the cycle of poverty which threatens not only our economic well-being, but our social and political health as well -- and that we weren't acting because the knowledge hadn't been adequately communicated to the policy makers and the public?

This is the kind of question that CED cannot duck. We immediately convened a second subcommittee with similar but not identical membership to the first to address those questions. Our earlier work had convinced us that while many of the school reforms which were gaining broad support and implementation would significantly improve the educational results for the 70-75 percent of children who finish school, they would do very little to improve our success with the children who were "dropping out" or simply marking time in school.

With this in mind, the CED subcommittee undertook to define the economic problem even more precisely and then to scour the country to identify and evaluate programs dealing with every element of early childhood involvement as well as "dropout prevention" and "illiteracy prevention" as possible solutions to that economic problem. What the committee learned was that first, the cost of not doing anything to reduce our dropout rate is astronomical, amounting to as much as $240 billion in lost earnings over the lifetime of each class of dropouts.

Second, we learned that the conditions that set a child onto a path of failure did not begin at age 3 or 4, but at conception and before.

And third, the committee learned that money or the lack thereof does not really define whether or not a child is truly deprived. It is whether the child has the opportunity to be raised in a family where the parent or parents are literate, where drugs and alcohol do not exist, and where the child is nurtured, encouraged, disciplined, challenged mentally and physically and taught that it is their responsibility to do the very best they can at any assignment given. In short, the determining factor was if the child had excellent "parenting". Also, added to that was the invariably healthy guidance from relatives, neighbors, church, and school -- all reinforcing the training at home, to which no cost can be ascribed.

The CED skeptics have asked us, including the editorial writers of the NEW YORK TIMES: "OK, now that you have described the problem, what do you propose to do about it." Here, Mr. Chairman, we come well armed. In the four years that we took to look at this issue which resulted in two complete statements on school reform and educationally disadvantaged children and which together contain several 100 recommendations on all aspects of elementary and secondary schools, we found programs that work not only to improve the schools but specifically that work to deal with the problems that beset the nation's poor children. What we have learned is that the returns on the investment in these programs are immense. For example:

- A $1.00 investment in pre-natal care saves $3.38 in the cost of care for low rate birthrate infants;
- $1.00 in children immunization saves $10.00 in later medical costs;
- $1.00 spent on pre-natal food supplement programs saves $3.00 in short-term hospital costs;
- $1.00 spent on pre-school education can save $4.75 in later social costs.

These costs are calculated once a child has been conceived. There is little question in our minds that education which comes before conception, particularly in the education of a prospective parent, as well as health and nutrition guidance and counseling may provide even greater returns to a society than the ones I have just mentioned. Let me cite just one example where education has served both the needs of the parent and the child: the New Futures School in Albuquerque, New Mexico. You will find a summary of this program in our paper, Children in Need. It should be noted that this New Futures Program is entirely funded out of local education resources and not through any special federal grant. What is remarkable about all this program is that a community can reach teenagers who are expectant mothers and through education can achieve tremendous improvements in the economic outlook for both these mothers and their children.

Our research has led us to conclude that efforts to reach the economic, education, and social needs of educationally disadvantaged children must begin with pregnancy and health counseling of teenagers, especially inner city teens.

From an economic standpoint alone, we determined the nation can profit hugely by ensuring that those children get good parenting all the way from adequate prenatal care through nurturing and preparation during the pre-school years to special help throughout the school years. Preventing the illiteracy, alcoholism crime, and teenage pregnancy into which so many of them will otherwise fall will save us far more in future taxes than the immediate cost of preventive programs.

You may wonder what all this has to do with today's hearing on education information and research. I would argue plenty. But while I am not all that well versed on all that education data collection and research has provided over the years, I do know what it has not provided. Simply stated, education research has not documented clear evidence, pro or con, on the economic returns of education. If there is any one reason why education research has failed to hold its own, and has suffered such continual cuts in its budgeting, it is because it has not linked clearly enough the relevancy of education, at whatever level, to the economic well-being and future of American society. Nor has the Federal education establishment initiated the kind of experimental research that is well designed enough to produce solid answers to important economic questions. This is true even when much of the research, such as in the area of vocational education, has been devoted to justifying itself on "economic returns."

The CED has gone on record stating its firm conviction that the federal role in research is a critically important one. Let me quote directly from our first policy statement on this subject:

> "We believe that increased productivity in education over the long term will stem mainly from the application of high-quality education research. Accordingly, we recommend that the federal government increase the quality and relevance of its education research and data collection through the Department of Education and those organizations with which it works."

We went on to list several programmatic areas that we felt warrented improved data correction and analysis:

- Comparative data on educational achievement
- Adult deficiencies
- Employment readiness
- International comparison
- Educational technology

We also went on to strongly support the NAEP, and recommended further support.

But what we need now is education research that is predicated on the importance of education to the economic welfare of the Nation.

It can be done. The Perry pre-school program is just one example. The work of the Manpower Development and Research Corporation is another.

One final thought in closing. Once the research is done, it needs to be disseminated and written in a manner people in the business of making policy can understand.

Thank you.

The New York Times

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For Children: A Fair Chance

Stop Wasting Lives, and Money

On Tuesday, a committee of business executives will publish a finding that could, over the next 15 years, change urban America. After decades of disappointment with anti-poverty programs, society is discovering that it knows how to do something that works:

Concentrate on helping poor children in their earliest months and years of life.

The business leaders, who joined with educators on a Committee for Economic Development research panel, are not usually aroused by issues like prenatal health or enriched pre-school education. But now they are; something's stirring in the political underbrush.

With presidential candidates already attracted to children's issues, this could be the season to seize the moment.

Save Three Children

Social welfare strategies have rolled in like waves. First it was housing, then services like social workers and clinics, then income strategies. None turned out to conquer poverty. Early childhood intervention won't do that, either. But instinct and social science affirm its powerful promise.

Cost-Effective Programs

WIC: Food for Women, Infants, Children	
Reduces infant mortality, increases birthweight. Participation: only a third of those eligible.	$1 spent on prenatal portion can save $3 in short-term hospital costs.
Prenatal Care	
Increases birthweight and reduces premature births in mothers who otherwise forgo prenatal care in the first trimester.	$1 investment saves $3.38 in the cost of care for low birthweight infants.
Medicaid	
Reduces neonatal and infant illness and abnormalities through Early Periodic Screening, Diagnosis and Treatment Services. In 1985, 2.1 million were screened.	$1 spent on comprehensive prenatal care for Medicaid recipients saves $2 in first-year care.
Childhood Immunization	
Reduces rubella, mumps, measles, polio, diphtheria, tetanus and pertussis. In 1983 more than 3.4 million children were immunized under the program.	$1 spent on childhood immunization saves $10 in later medical costs.
Preschool Education	
Increases school success and employability and reduces dependence. Only 20 percent of those eligible participate in Head Start.	$1 spent on preschool education can save $4.75 in later social costs.

Source: House Select Committee on Children, Youth and Families

Consider the famous Perry Preschool Project in Ypsilanti, Mich. In the early 1960's, it began offering preschool to 3-year-olds from poor homes and with below-average I.Q.'s.

In a rare long-term study, researchers followed 123 children until their 19th birthdays. They did remarkably well. They graduated from high school and went on to jobs or more education at twice the rate of children without the additional early schooling. They also had fewer arrests, detentions and teen-age pregnancies.

A year or two of early schooling so enhanced the children's confidence and sense of control that, as the researchers reported, their "better performance is visible to everyone."

All the more reason not to wait until a child is 3 or 4 years old. Why not start with prenatal care for frightened mothers, often children themselves? Why not provide classes in basic skills for fathers? An array of such services could save three children at once: The teen-age mother, her baby and the child she is persuaded to defer at least until she has finished school and gained both maturity and job skills.

Spend Where It Counts

Americans are generous about social welfare when they know it works, as with Head Start or food stamps. But they have learned to feel for their wallets when experts talk grandly about new schemes. Why should they react differently to early childhood intervention? Because it is known to work.

Strong evidence comes from the Perry Project. It cost $4,818 per child in 1981 dollars. But Ypsilanti recovered $3,100 almost immediately: the preschoolers required less remedial education and services. Other dividends have mounted as the years pass.

Another kind of arithmetic shows that early childhood intervention pays off. There were 240,000 low birthweight babies born in 1984. Hospital costs during the newborn period averaged $20,000. Complete prenatal and maternity care would have averaged about $3,300 — and probably would have produced healthier babies.

Experimental programs are already under way in several cities. One of the most ambitious is the Beethoven Project in Chicago's Robert Taylor Homes, the largest public housing project in the world. The program provides prenatal care and parenting education for expectant mothers, and eventually will offer developmental programs for infants and toddlers as well.

The idea is to deliver to the nearby Beethoven Elementary School in 1992 a class of kindergarten boys and girls physically, mentally, emotionally ready for school. If the experiment proves out, it will vindicate the conviction of the Committee for Economic Development panel that "improving the prospects for disadvantaged children is not an expense but an excellent investment."

From Abortion to Consensus

Attitudes about children have changed dramatically in the 15 years since then-President Nixon denounced then-Senator Mondale's developmental day care bill as something like Godless communism. Now, it's possible to identify and energize a potential coalition on behalf of early childhood intervention.

The issue engages basic and volatile issues like the sanctity of the family and parents' right to raise their children by their own best lights. Now, black churches have mobilized to help young women deal with illegitimate babies and minority parents respond to voluntary programs. Teen-age mothers need and want all the help they can get.

People on both sides of the abortion debate who care about family values join comfortably to promote early childhood measures. For instance, Representative Henry Hyde, the Illinois Republican who is a leader of the pro-life movement, sponsors legislation to give Federal health insurance to poor pregnant women.

Several Presidential hopefuls press for early childhood measures. New York City is already developing a program for school at 4. In Congress, the relevant Senate and House committees will conduct a rare joint hearing this week to consider early childhood legislation. Such a consensus is promising. To help children when help does the most good is an idea any citizen can appreciate. Likewise, the consequences of not helping children who lack a fair chance are also obvious.

Imagine a baby girl born into inner-city poverty today, to a teen-age mother. With an early childhood program, she'd be more likely to be born healthy, her mother could give her better care, and early schooling would enlarge her self-confidence. In 18 years, she'd probably be starting her last year in high school and have ambitions for the future. Without such a program, she's all too likely to have something else: a baby. And the heavy cycle will start again.

Mr. **Owens**. Thank you.
Dr. Coleman.

STATEMENT OF JAMES S. COLEMAN, NATIONAL OPINION RESEARCH CENTER

Mr. **Coleman**. Thank you, Chairman Owens and members of the subcommittee and committee. First I would like to say a few words about the current state of educational achievement. Then I will comment on some aspects of the organization of research on education.

There are a number of points that would strike an observer of American elementary and secondary education in relation to education in other countries with which we compare ourselves. One of the first of these is the low level of academic achievement of American children. There are various indicators of this. One of the most recent is the results of testing of science achievement carried out in 17 countries in the mid-1980's.

A representative sample of students of approximately age 10 was tested, another sample of approximately age 15, and a third sample of specialists in biology, chemistry, and physics in the last year of secondary school. This was done by a group long experienced in international testing, the International Association for the Evaluation of Educational Achievement, known as IEA for short.

At age 10 American students didn't do terribly. They were below Japan, Korea, Finland, Sweden, Hungary, Canada, and Italy, but they were above Australia, Norway, Poland, England, Hong Kong, Singapore, and the Philippines. At age 15, however, the only countries below the United States students are Hong Kong and the Philippines. American 15-year-olds are below the 15-year-olds in all other developed countries tested in average science achievement.

Now the results I have reported for these two age groups are for representative samples of students from the total age cohorts, with the exception of the Philippines, where only 60 percent of students are in school at the older age. At the last year of secondary school, however, age 17 or 18, only students who are studying a branch of science are included in what I will report.

In the United States, only 6 percent were biology students, fewer than in nine countries and more than in only four, but this select 6 percent had a lower average achievement than did biology students in any other country.

In chemistry, the percentage tested as specialists is only 1 percent, with 12 countries higher and only 1 as low as the United States. This highly select 1 percent of American 17-year-olds scores lower than the chemistry students in every other country but two, which have 25 percent and 14 percent of students in chemistry, respectively.

In physics, again 1 percent of students in the United States are included, less than in any other country, and this select 1 percent averages below the science students in nine other countries and above the science students in only four countries, where the physics specialists average 17 percent of the age group.

Thus, the picture of science achievement among American elementary and secondary students that an international observer would get is that of science achievement in a less developed country, and not at the top of the LDC's, either. The United States is, in science achievement in elementary and secondary school, virtually outside the range of science achievement in the other developed countries whose children were tested.

Now I wanted to begin with these comparisons to suggest the seriousness of the problem of academic achievement among American school children. This is a problem which, if allowed to persist, could easily turn the United States from the most affluent nation in the world into a less developed country. We have seen in recent years the movement of some countries from LDC status to the position of developed countries. Our children may be treated to the experience of the reverse movement.

I do not want to suggest that this problem is wholly a problem of the schools, for it is not. Nor do I want to suggest that it is a problem that will be cured by research, for it will not. It is a problem not only of schools but also of families, because weak and disorganized families are in no position to support their children in their schoolwork, nor are they in a position to impose strong demands on their children and to see that those demands are met. And without parental demands, the bargain struck between teachers and students in schools will be one in which teachers will accept a little bit of achievement for a lot of grade.

Now matters are of course not so simple as this. Teachers are products of the same system of families and schools that they are now themselves reproducing. If a nation does not train students in science in one generation, it does not have teachers that will train students in science in the next generation. The current problem, not merely in science but in all areas of education, is how to stop the system from degrading further and how to bring about a reversal.

Now these comments should give an indication not only of what I see as the central problems of American education today, but of what I see as central problems of research. The research question that I see as most central is a very practical and simple question: Why are we, compared to other countries, now preparing our children so poorly with the skills that will give them a productive adult life? This is a question that can be solved only by detailed, comparative studies in the United States and other developed countries.

These would, of course, be studies of schools and how they function. They should involve researchers sitting in children's classrooms and observing just how children spend their time in school, as I did yesterday in a third grade class. Now the children I observed in that class were generally happy and the teacher was excellent at keeping them happy and occupied, but my guess is that they were acquiring fewer basic skills that they would need in later education and as adults than were their counterparts on Tuesday, April 19 in Europe, in Japan, and in many other places.

The question I have posed is not answered merely by observing classrooms, nor merely by studies of schools of any sort. It is answered principally by studies of children's lives, lives both in school and out. These can be seen as studies of consumption and investment: How much of a child's life is being invested for that child's future, and how much is being consumed or squandered on activities that bring no future benefits? How can the time that is invested for the future be made to bring higher payoffs?

The research I am describing, research in to how we as adults induce, encourage, and allow our children to spend their time, is meaningful only if it is done comparatively across countries, for it is principally by comparison with others that we see just what we do to our children's lives. It is useful only if it is done in conjunction with measures of the results of that investment and consumption pattern, results of the sort that I described in comparing science achievement across countries.

We have been greatly hampered in educational investments in a way that we have not been in economic investments in good that are marketed. International comparisons of production and productivity in economic goods are abundant. They are almost entirely absent where the product is knowledge and skills that help children realize their potential as adults.

Thus a major area of research activity should be the creation and continuous updating of benchmarks for international comparison of the cognitive capabilities of children and youth, in areas ranging from knowledge of mathematics and music to knowledge of their natural and social worlds and the cultural products of the social world. It is, I believe, only such benchmarks that will keep us as a Nation focused on the task of enriching our children's lives so they can, as adults, successfully compete with children raised halfway around the world.

Finally, I will make a few comments about the organization of research. I will begin by indirection. In many areas of activity overseen by government agencies there are producers and consumers. In defense, the producers are the defense contractors and the consumers are all of us protected by the military. In health, the producers are drug companies, physicians, and hospitals. The consumers are all of us.

In some of these areas, sociologists and political scientists have identified a strong community of interest between persons in the agencies and the producers. There is, for example, often a fairly extensive traffic between jobs in the agencies and jobs in producer enterprises. A high Defense Department official will pop up next as a high official for a defense contracting firm.

There need be nothing wrong with this, so long as someone's interests are not lost in the process. After all, the principal aim of the Defense Department should be to provide defense, not to provide defense contracts. The principal aim of the Department of Health and Human Services should be to oversee the provision of health, not to increase the fraction of national income that goes to health providers. It is clearly important that in such areas there be some means of ensuring that the interests of the consumer—of defense or of health—are furthered by the institutions.

I want to suggest that in the area of education, matters are no different. The providers in this case are of two sorts: One is providers of education, that is, schools of education, school systems, schools, principals, and teachers, along with their professional associations. A second is providers of educational research, whether at their universities, at educational R&D labs, or elsewhere, along with their professional associations.

The patterns are similar to what can be found in other areas. There is a natural traffic between jobs in the Department of Education and jobs in the educational establishment. My friend Mike Timpane sitting at my left on this panel, for example, has traveled this path, with the Government's loss being Columbia's gain.

There is nothing wrong with this traffic. It is both necessary and healthy, but again the point is that what is important is that the consumers' interests don't get lost. Here the consumer is the child and the youth. The education of children and youth occurs partly at schools but not wholly so. It occurs also at rock concerts, at a job at McDonald's, and in front of the television set. It occurs in family activities, in the way children and youth spend their evenings, whether at home or out with friends.

If there is no means of ensuring that the consumer's interests are attended to, then one prediction is clear: The weight of expenditures of the Department of Education will be focussed on matters of interest to the producers. Expenditures on research will be weighted on research on schools and teachers, to the neglect of the study of children's learning outside school. Expenditures in education will be weighted toward direct transfers to schools, and from there to expenditures like summer salaries for teacher training, with a neglect of funding educational activities outside schools, or of giving educational consumers a voucher to invest in tutoring or another educational activity of their choosing.

To suggest how Congress might help to provide this insurance on behalf of the children and youth of America goes beyond the intent of my remarks today. One implication is clear, however: This is that the Department of Education is not a department of schools and educational researchers, any more than the Department of Defense is a department of defense contractors, nor any more than the Department of Health and Human Services is a department of physicians, hospitals, and drug companies.

It is Congress' task to help define the mission of that department as a concern with the education of children in whatever setting. If there is one thing that recent research has shown, it is that a child's education depends on what goes on in that child's life, not merely on what goes on in that child's school.

There has been a sharp decline in Federal educational research expenditures in the 1980's. As that investment in children is restored, as I assume it will be in the next presidency, the restoration offers an opportunity to define the Department of Education's mission not by the interests of the producers, whether teachers like the ones I observed yesterday, or educational researchers like myself, but by the interests of America's children and youth. This means, of course, that the major new research investments should be made in activities that go on outside school but are relevant to the educational growth of children.

Thank you.

[The prepared statement of James S. Coleman follows:]

Statement before the Select Education Subcommittee
# of the Education and Labor Committee
# of the House of Representatives

James S. Coleman
Professor of Sociology and Education, University of Chicago
Research Associate, NORC

April 19, 1988

I want to emphasize a few points in my opening statement. First, I will say a few words about the current state of educational achievement in American schools. Then I will ask what kind of research might be most helpful in improving that state. Third, I will comment on some aspects of the organization of research on education.

There are a number of points that would strike an observer of American elementary and secondary education in relation to education in other countries with which we compare ourselves. One of the first of those is the low level of academic achievement of American children. There are various indicators of this. One of the most recent is the results of testing of science achievement carried out in seventeen countries in the mid-1980s. A representative sample of students of approximately age 10 was tested, another sample of approximately age 15, and a third sample of specialists in biology, chemistry, and physics in the last year of secondary school. This was done by a group long experienced in international testing, The International Association for the Evaluation of Educational Achievement, known as IEA for short.*

At age 10 (actually, the U. S. sample was slightly older than others in the study), American students did not do terribly. They were below Japan, Korea, Finland, Sweden, Hungary, Canada, Italy, but above Australia, Norway,

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*I.E.A., Science Achieverent in Seventeen Countries Oxford: Pergamon Press, 1988).

Poland, England, Hong Kong, Singapore, and Philippines. The U. S. was just about at the middle of this set of countries. Seven were above, and seven below. True, the bottom three countries are less developed countries, but four below the U. S. are not.

At age 15, however, the only countries below the U. S. students are Hong Kong and the Philippines. American fifteen year olds (again a little older than their counterparts tested in other countries) are below the 15 year olds in all other developed countries tested in average science achievement. The picture is no better if we look at only the top 25% in each country. Again only two countries are below the U. S. .

The matter is more complex for those students specializing in science in their last year of high school. The results I have reported for the two younger groups are for samples of students from the total age cohorts, with the exception of the Philippines, where only 60 percent of students are in school at the older age. At the last year of secondary school, however, age 17 or 18, only students who have studied or are studying a branch of science are included in what I report.

In the U. S., only 6% were biology students, fewer than in 9 countries, and more than in only 4. But this "select" 6% had a lower average achievement than did biology students in any other country.

In chemistry, the percentage tested as specialists is only 1%, with 12 countries higher and only one as low as the U. S. . This highly select 1% of American 17 year olds scores lower than the chemistry students in every other country but two, which have 25 and 14% of students in chemistry, respectively.

In physics, again 1% of students in the U. S. are included, less than in any other country, and this select 1% averages below the science students in 9 other countries, and above the science students in only 4 countries, where the physics specialists average 17% of the age group.

Thus the picture of science achievement among American elementary and secondary school students that an international observer would get is that of science achievement in a less developed country - and not at the top of the LDCs either. The U. S. is, in science achievement in elementary and secondary school, virtually outside the range of science achievement in the other developed countries whose children were tested.

I wanted to begin with these comparisons to suggest the seriousness of the problem of academic achievement among American school children. This is a problem which, if allowed to persist, could easily turn the U. S. from the most affluent nations in the world into a less developed country. We have seen, in recent years, the movement of some countries from LDC status to the position of developed countries. Our children may be treated to the experience of the reverse movement.

I do not want to suggest that this problem is wholly a problem of the schools, for it is not. Nor do I want to suggest that it is a problem that will be cured by research, for it will not. It is a problem not only of schools, but also of families, because weak and disorganized families are in no position to support their children in their schoolwork, nor are they in a position to impose strong demands on their children and see that those demands are met. And without parental demands, the bargain struck between teachers and students in schools will be one in which teachers will accept a little bit of achievement for a lot of grade.

Matters are of course not so simple as this. Teachers are products of the same system of families and schools that they are now themselves reproducing: If a nation does not train students in science in one generation, it does not have teachers to train students in science in the next generation. The current problem, not merely in science, but in all areas of education, is how to stop the system from degrading further, and how to bring about a reversal.

These comments should give an indication not only of what I see as central problems of American education today, but of what I see as central problems of research. The research question that I see as most central is a very practical and simple question: Why are we, compared to other countries, now preparing our children so poorly with the skills that will give them a productive adult life? A cynic might answer this by pointing to the intense concern of American adults with ourselves as individuals: our careers, our pleasures, our health, our consumption. It is, however, certainly more complex than this. It is a question that can be solved only by detailed comparative studies in the U. S. and other developed countries.

These would of course be studies of schools and how they function. They should involve researchers sitting in children's classrooms and observing just how children spend their time in school -- as I did yesterday in a third grade class. The children I observed in that class were generally happy, and the teacher was excellent; but my guess is that they were acquiring fewer basic skills that they would need in later education and as adults than were their counterparts on Tuesday, April 19, in Europe, in Japan, and in many other places.

The question I have posed is not answered merely by observing classrooms, nor merely by studies of schools of any sort. It is answered principally by studies of children's lives, lives both in school and out. These can be seen as studies of consumption and investment: How much of a child's life is being invested for that child's future, and how much is being consumed by activities that bring no future benefits? And how can the time that is invested for the future be made to bring higher payoffs?

The research I am describing, research into how we, as adults, induce, encourage, and allow our children to spend their time, is meaningful only if it is done comparatively across countries -- for it is principally by comparison with others that we see just what we do to our children's lives. And it is useful only if it is done in conjunction with measures of the results of that investment-and-consumption pattern, results of the sort that I described in comparing science achievement across countries.

We have been greatly hampered in educational investments in a way that we have not been in economic investments in goods that are marketed. International comparisons of production and productivity in economic goods are abundant; they are almost entirely absent where the product is knowledge and skills that help children realize their potential as adults. Thus a major area of research activity should be the creation and continuous updating of benchmarks for international comparison of the cognitive capabilities of children and youth - in areas ranging from knowledge of mathematics and music to knowledge of their natural and social worlds and of the cultural products of the social world. It is, I believe, only such benchmarks that will keep us as a nation focussed on the task of enriching our children's lives so they can, as adults, successfully compete with children raised halfway round the world.

Finally, I will make a few comments about the organization of research. I begin by indirection. In many areas of activity overseen by government agencies, there are producers and consumers. In defense, the producers are the defense contractors, and the consumers are all of us protected by the military. In health, the producers are drug companies, physicians, and hospitals; the consumers are all of us. In some of these areas, sociologists and political scientists have identified a strong community of interest between persons in the agencies and the producers. There is, for example, often a fairly extensive traffic between jobs in the agencies and jobs in producer enterprises. A high Defense Department official will pop up next as a high official for a defense contracting firm.

There need be nothing wrong with this, so long as someone's interests are not lost in the process. After all, the principal aim of the Defense Department should be to provide defense, not to provide defense contracts; the principal aim of the Department of Health and Human Services should be to oversee the provision of health, not to increase the fraction of national income that goes to health providers. It is clearly important that in such areas, there be some means of insuring that interests of the consumer -- of defense, or of health -- are furthered by the institutions.

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There is nothing wrong with this traffic; it is both necessary and healthy. But again the point is that what is important is that the consumer's interests do not get lost. Here the consumer is the child and the youth. The education of children and youth occurs partly at schools, but not wholly so. It occurs also at rock concerts, at a job at McDonald's, and in front of the television set. It occurs in family activities, in the way children and youth spend their evenings, whether at home or out with friends.

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To suggest how Congress might help provide this insurance on behalf of the children and youth of America goes beyond the intent of my remarks today. One implication is clear, however. This is that the Department of Education is not a Department of Schools, any more than the Department of Defense is a Department of Defense Contractors nor any more than the Department of Health and Human Services is a Department of Physicians, Hospitals, and Drug Companies. It is Congress's task to help define the mission of that Department as concern with the education of children, in whatever setting. If there is one thing that recent research has shown, it is that a child's education depends on what goes on in that child's life, not merely on what goes on in that child's school.

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Mr. OWENS. Thank you.
Dr. Jones-Wilson?

STATEMENT OF FAUSTINE C. JONES-WILSON, THE BUREAU OF EDUCATIONAL RESEARCH, SCHOOL OF EDUCATION, HOWARD UNIVERSITY

Ms. JONES-WILSON. Thank you, Mr. Chairman.

Like the preceding speakers, I would like to commend you and your committee for time and attention to this important task, and like the preceding speakers, I certainly support research, I know its importance, and it is absolutely essential that we continue to produce new knowledge.

At the same time, though, perhaps unlike them, I am very glad that we didn't have to wait for the appropriate research design to decide to establish a system of public schooling for all the children of all the people, because we might not have had it yet. And so as researchers argue with each other often at the level of higher education about the right methodology or whether or not the research design is perfect, the children, especially the poor children, continue to grow up every day, every year, in schools where the knowledge that we have already unearthed does not trickle down to be well used for their benefit.

I think it is very important, sir, for you and the committee to realize that at this point in time we are paying the price for a very long history of second-class citizenship in this country, and that second-class citizenship has included policies and programs of schooling that contributed to a kind of compulsory ignorance. It seems to me that really it has only been since 1964 that we have even arguably made an effort to educate the under class, and here certainly the minorities would be a disproportionate number of the under class, but many poor white children aren't being well educated, either. But I submit that really it has only been since about 1964 that we have even piecemeal tried to make an effort to educate these children. Now in the course of human history, that is a very short time. That is only 24 years ago, and so I would like to begin that way because it is my experience that schools can make a big difference in the lives of children and youth. They can help those children to break the cycle of hopelessness and learned helplessness, if schooling is conducted correctly.

You will find that very few minority people come from wealthy backgrounds or enjoy income from ownership and investments. They have to work, and so proper schooling is the means by which the children of these people expect to be employable and ultimately to become contributing citizens to this country, so it is very important that we have the kind of research that would contribute to that. Now let me say—I will go back to my point. We have some research that we don't seem to be using effectively. For example, the Perry Preschool Program has been referred to, and I believe that this is a program of integrity which has not been replicated throughout the United States. Now maybe research ought to uncover why that program has not been replicated. We all know that it was successful, and to the best of my knowledge it has not been fully funded. Certainly we know that it has not been replicated all over the country, so why is it then that we don't use the knowledge that we have in terms of educating children at a very young age so that they can stay in school, so that they can become good employees and that kind of thing?

Now in the February 1988 issue of Phi Delta Kappan, Terrell Bell reported information which is presented in his book, "The Thirteenth Man," and he says in that article that we have 20 years of experience now with respect to which Head Start, title 1, chapter 1, and Job Corps programs were successful. We have that information. Now again, why have we not replicated those programs that were successful? Instead, what we keep repeating is the critiques of the programs that were not successful. How useful is that in helping the children in the schools?

In like manner, Dr. James Comer of Yale has maybe 20 years of experience in intervention programs, in helping poor children in New Haven, CT, and now he has some programs going in Prince Georges County, MD. Why is it that we don't build on the knowledge that his research and service activities have unearthed?

Furthermore, the late Ron Edmonds, Brookover, Lezotte, Levine, researchers of this quality, Barbara Sizemore, these persons have participated in effective schools. What they did in the early 1970's was begin to go into some of those inner city schools that seemed to be working despite all the problems that they had, to try to see what common characteristics existed in those schools, and they found a set of characteristics which are pretty well known now.

Now the question is, Why is it that those successful schools are not studied and replicated? Instead, what we get is criticisms, that the theoretical base is too simple, that intervention research won't help. We really need to look at those effective school principles that have been uncovered. We need to look at the schools that are succeeding by using those principles, and perhaps look at them as pilot programs, as success stories from which other such schools could be run.

We need to go back to some of the things that are in print. If you look at the Kerner Commission report of 20 years ago, there were pages and pages of recommendations for education. I don't know what has happened to most of those recommendations. Again, they have not been fully implemented across the country.

What you will find in this country are pockets of implementation but not universal implementation, so if we want to do something about our whole Nation, we need consistency, we need maintenance of programs, we need dissemination of information. My guess is that the average third grade teacher or average fifth grade teacher does not know what the research has uncovered, and the researchers in general do not go into the classrooms of our Nation to work with the teachers, so what we need here clearly is better articulation between the researchers and the information that they uncover, and the persons who are on the firing line who are supposed to implement those programs.

So I won't repeat what is in my testimony, but I do believe that what we need is not only more research but to implement the results of the positive research that has already been undertaken.

[The prepared statement of Faustine C. Jones-Wilson follows:]

TESTIMONY OF FAUSTINE C. JONES-WILSON
BEFORE THE SUBCOMMITTEE ON SELECT EDUCATION
HOUSE COMMITTEE ON EDUCATION AND LABOR
April 20, 1988

THE HONORABLE MAJOR R. OWENS, CHAIRMAN

Sir:

I commend you and your fellow committee members on your concerns about America's key educational priorities and the federal role in sponsoring the kind of educational research and development that will enable educators and education advocates to achieve the aims and goals emerging from those priorities. I will not attempt to list all of America's educational priorities but will focus on a particular segment of our citizenry which is most "at risk" in most dimensions of their lives. This segment is America's poor -- America's underprivileged "underclass." The children and youth from this group are the underachievers in schools who may drop out, fail, fall victim to drugs, engage in street crime, become parents out of wedlock while still teenagers, wind up in jail, or unemployed, and/or recipients of public assistance.

Ours is a democratic, affluent society. The promise of democracy is that all the children of all the people shall be educated so that they may become contributing, participating, thoughtful citizens. While it is true that a democratic political system requires such citizens, it is also true that our economic system needs workers and taxpayers who will maintain and expand our industries, our Social Security system, our national income. Our communities need and deserve cultivated, disciplined adults who will plan and implement programs to upgrade the quality of life across this great nation. We need to learn how to live together in a nation that is increasingly diverse, with increasing proportions of the poor and the ethnically different from the white, Anglo Saxon Protestant majority group. We must learn how to live in harmony, mutuality, and reciprocity in a global community that is increasingly interdependent -- where shocks in one country affect other countries almost immediately -- and where long-term implications of U.S. internal underdevelopment are very negative internationally and domestically. In our changing pluralistic society, increasingly interrelated with other nations in a global economy and world social order, we must end the makeshift arrangements that have prevailed with respect to educating poor children and children of racial/ ethnic groups with castelike social status. We must stop blaming the victims, "passing the buck," and work to end the facade that has been erected respecting the ability of these children to learn to read, write, compute, and develop higher order thinking skills/abilities.

There is ample demographic data to support my concerns. By 1990 it is expected that minority persons of all ages will constitute 20-25 percent of the U.S. population, and that their proportion among youth cohorts eligible for schooling will be over 30 percent.[1] By the year 2000 38 percent of the under eighteen population of the U.S. will be Black, Hispanic, Native American, and Asian. By 2017 it is projected that one of three of us will be non-White. Minority proportions of children and youth are expected to grow well into the twenty-first century, and cover a broader socioeconomic range than ever before. Homelessness now complicates the lives of many underprivileged children -- not only in terms of living arrangements but also in terms of schooling places (or lack of them). Even today in each of the nation's largest twenty-four school systems minorities are a majority, and there are nineteen cities in which Blacks are 40% or more of the population. This brief survey surely indicates that simplistic treatment of the needs of minority children, particularly Black children, will not be helpful.[2]

The lives and schooling of "at risk" children and youth must become an authentic priority for our nation. The nation's birth rate has declined, so of course the school-age population has also declined, from 53 million in 1970 to 45 million in 1986.[3] Larger proportions of this smaller number are minority children, and the poor among these minorities are "at risk." As these youth move up the schooling ladder they must be properly educated so that they may make democratic citizens, able employees, earning and taxpaying persons, effective international competitors.

To fail to educate this segment of our population means that our society will have fewer and lower paying taxpayers, fewer people able to maintain a Social Security system for the "baby boomers" as they age, more people asking for and needing public assistance in all its forms, more people likely to commit street crimes, more prisons to house lawbreakers, more fear and human isolation in our communities as people lock themselves in their homes behind bars and with burglar alarm systems, afraid to go out after dark. We will lack competent workers in all fields, and will be unable to compete effectively and equally in international production rivalries, e.g., steel, automobiles. Our social climate will be marked by fear, distrust, suspicion, animosity -- and our democracy will clearly be a facade which other nations will brand a mockery.

We have had ample warning that this state of affairs could and would occur. Sometimes I wonder if anyone remembers the 1968 Report of the National Advisory Commission on Civil Disorders, more commonly known as the "Kerner Report." This prestigious commission analyzed the civil disorders, which they said resulted from over 300 years of inequities, and provided not only the causes of the problems but also remedies, including educational remedies. Pages 424-456 of the paperback text of this report are addressed to recommendations for national action in education. I will return to these recommendations in just a bit. But first, we need a brief look at what educational policy and practice have been for Blacks, the largest minority in our country.

As Meyer Weinberg and Horace Mann Bond have pointed out, for most of America's history "compulsory ignorance" has been the cornerstone of educational policy for Blacks. It is too well known to re-state here that the laws and customs of the South, where most Blacks lived and still live, forbade the schooling of Blacks for more than two hundred years. After the Civil War, Blacks were permitted to attend school, but the 1896 Plessy v. Ferguson decision established a public policy of "separate but equal schooling" which was formally in force until 1954. Undeniably, that schooling was indeed separate but never equal. Brown I and Brown II (1954-55) overturned Plessy, but the public policy response was "massive resistance" in many states and communities, and the response of many individuals collectively has been called "white flight" from desegregating schools. It was not until the passage of the 1964 Civil Rights Act, and enforcement of its Section VII which permitted the withholding of Federal funds from discriminating school districts that school desegregation became mcre widespread in the South, and with it the possibility of more equity in equipment, funding allocations, curriculum, and so on. It is important to note that some school building inequities had been remedied between 1954 and 1964 as school systems sought to placate Black parents pushing for equal educational opportunity by constructing new buildings for Black children to replace the substandard schools they had occupied for so long.

The point of this educational review is to state explicitly that there had been no real attempt to educate Black children equally until about 1964, and even arguably since that time. That was only 24 years ago, just a brief amount of time. Nonetheless, since World War II ended there has been a steady improvement in rates of Black participation and in the median years of schooling that Blacks complete. However, the problems that persist are particularly intractable because of the total set of life conditions faced especially by poor Black children, and the problems adversely affect their possibilities for learning, growth, and development in desirable ways.

The school can be of singular and paramount importance in breaking the cycle of hopelessness and learned helplessness faced by these children and youth. Most Americans, including Black Americans, whose status is middle class or above credit schooling and teachers as major factors in their development, thereby preparing them for inclusion in the mainstream. Few minority persons come from wealthy backgrounds, or enjoy income from ownership and investments rather than work. Thus, education is their chief means toward the ends of remunerative employment, comfortable housing, favorable self concept, and so on. Proper schooling of high quality can serve the same function for the poor and for the society, if we will so design it, fund it, and maintain it over time.

The existing network of labs, centers, and clearinghouses does not properly address minority concerns. I seem to recall that less than five percent of their budgets and proposals are addressed to minority concerns. If we examine the recent past we see that urban schools have gone from what seems to be "fad to fad," rather than concentrating on what we know works. There can be no "quick fixes" that are meaningful and long-lasting for today's urban children or their schools. The blueribbon "school reform" reports, such as the Holmes and Carnegie Reports, don't dwell on the research that is needed, and what research findings, properly implemented, can do. In fact, so many of the reports of the last five years seem to focus on gifted and talented children's needs and development, or on society's needs for specialists in such fields as mathematics and the sciences. What is to be done with the rest of America's populace -- average learners, the poor, and so on?

There is knowledge on which to build. The longitudinal research of the Perry Preschool Program in Ypsilanti, Michigan has provided data that early childhood programs pay off in the lives of the learners and their families. Why is it that that program has not been fully funded to continue its teaching, research, and service? It appears that when a program is successful, or shows great promise of success, it is abandoned or just enough funding remains to permit minimal activity. This minimal activity cannot possibly do the job that needs to be done, but the appearance of assistance is maintained by power holders who are policymakers. The Perry Preschool Program has integrity as a study, and should become a demonstration center for early childhood education and for developing competent professionals. Also, there should be planned and monitored articulation between Head Start programs and other early childhood programs and school-based activities/programs that follow in kindergarten and the elementary grades. In other words, there should be a system of support that helps the child from age two or three through high school so that equity and parity with the majority population could occur in schooling patterns.

In the February 1988 issue of Phi Delta Kappan, Terrell Bell pointed out that twenty years of experience exist with respect to which Head Start, Title I/Chapter 1, and Job Corps programs were successful. He recommends that the successful programs be replicated, and that dropout prevention programs that foster closer ties between home and schools be instituted. I concur with his recommendations. It is clear that further research can be done on these programs and that they, too, can become demonstration sites for educational development.

Dr. James P. Comer of Yale University has to his credit successful schools in New Haven, Connecticut and in Prince George's County, Md. that were developed from his policies, planning, and programs. His book, School Power, explains his philosophy and methods. The book has been followed by a number of articles in scholarly publications. By this time Comer's New Haven schools should be demonstration sites for educational development of others, if federal funds were allocated for that purpose and sustained over time. Dr. Comer is himself an outstanding scholar who directs the School Development Program at the Yale Child Study Center. He knows the nature of the educational problems of "at risk" children, what intervention strategies and programs will solve their problems, and how to implement them. He also understands program evaluation.

In like manner, ever since 1971 researchers have collected and disseminated information on unusually effective inner city schools. Most of these are, or have been, elementary schools that defied the odds and showed that Black poor children can learn and be taught. The work of the late Ronald Edmonds, George Weber, Wilbur B. Brookover, Lawrence W. Lezotte, Daniel U. Levine, Eugene E. Eubanks, Barbara A. Sizemore, and others can be cited in this respect.[4] Although there are some variations in the work of these researchers, essentially they agree that effective schools for the poor and the Black have common elements: a principal who is a strong instructional leader, a school climate conducive to learning, high teacher expectations, an emphasis on basic skills instruction and high levels of time on task; constant evaluation and assessment of students' performances. While criticisms of effective schools research exist,[5] and their cautions heeded, nonetheless there are models of effective elementary, junior high, and high schools. There are other urban schools that are improving, based on usage of effective schools principles, but not yet correctly called "effective." The 1988 summer yearbook of the Journal of Negro Education will carry case studies of some of these urban schools that work. The settings that are indeed effective schools could become development/dissemination sites -- if they had federal funding for such activities. Again, more research and replication activities could occur with proper interest and support.

Returning to the Report of the National Advisory Commission on Civil Disorders, twenty years ago this prestigious group recommended pursuit of the following strategies to improve educational opportunity for the disadvantaged: (1) increase efforts to eliminate de facto segregation, (2) improving school-community relations, (3) expand opportunities for higher and vocational opportunities. More specifically, among other recommendations were improving the quality of teaching in ghetto schools, year-round education for disadvantaged students, early childhood education, intensive programs to increase verbal skills of ghetto residents, and so on. The details are specified in pages 424-456 of the report. Funding for these educational efforts was to come primarily from the Federal government. However, states were requested to reexamine their state aid formulas so that they could provide more per-student aid to districts with large proportions of disadvantaged students. Also, states were urged to implement urban-suburban cooperation and metropolitan planning. Local governments were urged to lead their communities in the acceptance of policies that promoted integration and that improved the quality of education in existing racially segregated schools. Further, the business, religious, civic, and professional communities were urged to be responsible for sharing the above-named goals at the state and local levels. We need to re-examine these prescriptions and utilize those that remain viable twenty years later, 1988.

We must always remember the following passage from Ron Edmonds' work:

> . . . whether or not we will ever effectively teach the children of the poor is probably far more a matter of politics than of social science, and that is as it should be. It seems to me, therefore, that what is left of this discussion are three declarative statements. We can, whenever and wherever we choose, successfully teach all children whose schooling is of interest to us. We already know more than we need in order to do that. Whether we do it must finally depend on how we feel about the fact that we haven't so far.6

With this background, in addition to what we already know, research is needed to provide new or supportive information as follows.

1. What educational and experience patterns will produce the kinds of principals and supervisors who know what to do to administer effective schools, how to do it, and who care enough to administer well and consistently over time? How do we replicate the attitudes and behaviors of successful administrators who are promoted, move on to other places, or retire?
2. What teacher education/experience patterns will produce teachers who believe that all children can learn, and will therefore have high expectations for and of them? More specifically, how can we erase the perception that the poor and the Black are genetically inferior, and/or so environmentally deprived that it is a hopeless job to try to provide equitable education for them?
3. What staff development programs will enable in-service teachers, secretaries, and other school personnel to have high expectations of poor and minority children, and to institute programs that will change ineffective school routines?
4. What evaluation/monitoring plans can be instituted to ensure that school personnel cooperate in planned change designed to enhance academic achievement of the young?
5. How can an effective supportive network of teachers, students, administrators, parents, and community be formed and sustained at the building level? at the district level?
6. What are the verifiable effects of changing the curriculum to include the history, culture and experiences of the

minority groups in the school? Included in curricular revisions should be an emphasis on relating what is to be learned to the lives of the learners.

7. Although there is some evidence that class sizes under 20 students help the achievement of students in low income schools, more research is needed on the relationship of class size to student achievement.

8. In like manner, more research is needed on grouping practices within elementary classrooms. How many reading groups can a teacher handle effectively, for example?

9. More research on restructuring the school day is needed. Parallel block scheduling practices seem to help instructional effectiveness because a greater concentration of time is allowed in reading and mathematics instruction. Also, students are not pulled out of these classes for remedial instruction in isolation.

10. The research indicates that focusing the school day on academics is necessary, with more explicit teacher-directed instruction (time on task). More research is needed here.

11. More research is needed on altering the negative routines in the school, and what appropriate other routines must be substituted.

12. Research is needed to ascertain the positive effects of using parents as teacher aides, parents as tutors, peers as tutors in low income schools.

13. Research is needed on the effect of the testing movement on low income schools, as well as all other schools. It appears that standardized tests are becoming controlling factors in what is being taught in schools, and rote learning is one result.

14. Much more research is needed at the secondary level to ascertain what it will take to revise those schools and make them workable for youth. The effect of work-study programs, for example, would be helpful, as would business/education partnerships.

15. Research is needed on the effect of philanthropists on children's motivation to stay in school and achieve. Mr. Lang, for example, in New York promised free college education to those students in his former school who worked hard, achieved, and graduated. He set up intermediary assistance steps to encourage the youth, assist them, and assure them his promises were real. Most of these youth stayed in school to graduate. What does philanthropy do to the self-concept of these children? Does it make their families behave differently? Other philanthropists are emulating Mr. Lang. Their benevolence is gratifying. We need research on this new phenomenon and its effect on low income urban children.

Let me emphasize that I have not done the research that I referred to in this presentation. It has been my good fortune to be editor of the Journal of Negro Education at Howard University, and in that role I have been able to publish the research of others. I urge you particularly to read our 1985 summer yearbook, our special issue (Winter 1987) focusing on the home environment and help for low income children, as well as our forthcoming 1988 summer yearbook which will feature case studies of urban schools that work.

In addition, for more than two years now I have worked with effective schools researchers and education advocates through the National Conference on Educating Black Children. It has been my good fortune to learn from many of these persons, and it is their thoughts that I present here, as well.

Thank you for the opportunity to present my views. I know that all children can learn if they are provided the conditions and resources to make academic achievement possible.

End Notes

1. Constance Carter Cooper, "Implications of the Absence of Black Teachers/Administrators on Black Youth," *The Journal of Negro Education* , 57 (1988), 123.

2. L. Scott Miller, "Nation Building and Education," *Educational Digest*, LII (1986), 13. See also Harold L. Hodgkinson, "All One System: Demographics of Education--Kindergarten Through Graduate School," and "What's Ahead for Education," both written for the American Federation of Teachers.

3. Marc Fisher, "Obstacles Litter Students' Path to the Mainstream," *The Washington Post*, 18 April 1988, p. A12.

4. See the entire issue, summer yearbook 1985. *The Journal of Negro Education*, 54 (1985), 255-472.

5. See Barbara Sizemore's review, *The Journal of Negro Education,* 54 (1985), 281-284. She cites the research of Brian Rowan, Steven T. Bossert, David C. Dwyer, Stewart C. Purkey and Marshall S. Smith, Larry Cuban, John Goodlad, Asa Hilliard, and so on.

6. Ronald Edmonds, "Some Schools Work and More Can," *Social Policy* 9 (1979), 32.

Mr. **Owens**. Thank you.
Mr. Doyle.

STATEMENT OF DENNIS P. DOYLE, SENIOR FELLOW, HUDSON RESEARCH INSTITUTE

Mr. **Doyle**. Chairman Owens, Mr. Bartlett, and Mr. Williams, it is a pleasure to be here. I am Dennis Doyle. The record will show that until April 1981, 7 years and 2 days ago, I was the chief of program planning for the Office of Research and Improvement, U.S. Department of Education, and before that I was an assistant director of the National Institute of Education, where I had the pleasure to serve under Mike Timpane, who was then director. Since that time, I spent 5 years as the director of education policy studies at the American Enterprise Institute, and for the past 2 years I have been a resident fellow in education at the Hudson Institute, where I have had the opportunity to follow the Federal Government's role in education research, indeed since its inception with the National Institute of Education.

Now it would serve no good purpose today to comment on the checkered history of education research except to observe that most policymakers, particularly Members of Congress, are underwhelmed by its findings. It is not, I think, telling tales out of school to note that education research has much promise but only limited results, particularly for practitioners, but it is about the promise of education research that I want to talk today.

In the limited time available to me, I would like to discuss it from the perspective of the business community. As anyone who reads the daily papers knows, America faces an unparalleled economic challenge today. The industrialized nations, particularly Japan, have reached levels of economic output without precedent. The United States finds itself in an unfamiliar and unwelcome position. We find ourselves very hard pressed to compete successfully.

Now the reasons for our declining competitiveness are many, but I would suggest that the keys to restoring it are few, and as it happens, these keys hang from a single ring. The keys are education—elementary, secondary, and postsecondary, public and private; training, both formal and informal, on the job and in school; and attitudes toward education and work. Now the key to improving each of these, from a public policy perspective, must be research.

As research works in the natural sciences, so too it can work in education and training. That results to date have been of limited efficacy should only encourage us to redouble our efforts.

Let me remind the committee that good education research is not arcane, jargon-laden material prepared for publication in little read and less noted academic publications. Good education research should have as its ultimate objective the improvement of practice.

In that connection, education research should help restore our competitive position. This means that education research should be both bigger and better, it should be more generously funded by the Congress; and it should produce more useful results. We need education research of higher quality and higher yield.

Let me turn to two efforts that I have been involved with over the past several years. The first has already been referenced by

Nate Semple: work with the Committee for Economic Development, in which I happen to be the project director for the policy statement produced titled "Investing in our Children: Business and the Public Schools." Marsha Levine, my codirector, is now with the American Federation of Teachers, and together we had the privilege to oversee some of that work. Let me quote from the findings of the policy statement.

> Private industry could not succeed with a data collection system and research base as weak as this Nation has in the field of education. Yet, it is only through education research and data collection that we can expect to identify ways and means to increase the output of the education system.

More recently, I have completed a book with the chief executive officer of the Xerox Corporation, David Kearns, to be released in May. Its title is: "Winning the Brain Race: A Bold Plan to Mark America's Schools Competitive." Now Kearns and I argue that without adequate research funding, American schools cannot enter the 21st century. Indeed, the American economy cannot enter the 21st century successfully without world class schools.

By way of illustration, look at the Federal Government's expenditures on education research. With the most generous definition of education research, it is hard to find as much as $100 million in the overall Federal budget. Contrast that to the amount we spend operating the Nation's elementary and secondary schools, about $150 billion per year. In turn, contrast that to the amount that a corporation like Xerox spends on research each year, $700 million.

The example of Xerox is apt. As the developer of plain paper copying, Xerox once appeared impregnable to market challenge, but Xerox was severely buffeted by competitive forces in the seventies and early eighties. Only recently has Xerox recovered market share from the Japanese, an accomplishment almost without precedent in this period of global competition. That accomplishment was made possible in large part by research, both into product development, manufacturing and distribution, as well as research into matters of internal management and organization.

I would suggest to you that the Nation's public schools face similar challenges today. Without the underpinnings of solid and effective research, they will be in even more serious trouble. Now why should the Federal Government underwrite this activity? The question of course is rhetorical, because no other unit of government has the scale, the scope, or incentive to do so. Each level of government should do what it does best, and what the Federal Government should do best is data collection, research and development, with national implications.

What should Federal priorities be? They should be three, the most important ones facing the Nation today: content, competence, and context. The issue here is not to establish a national curriculum but to identify what it is every American should know and be able to do. That is in its first instance a descriptive, not a prescriptive, exercise.

Second, standards of performance for teachers and students should be identified. Again, at the Federal level, this should be descriptive, not prescriptive. States and localities can adopt or not adopt them as they see fit.

Finally, in a diverse nation of immigrants, one comprised of strikingly different regions and interests, it is important to examine the context in which content is imparted and competence acquired. Not everyone learns in the same way. Not all good teachers teach the same way. The Federal Government should support diversity and variety in teaching and learning as it exercises its central responsibility to underwrite useful research by supporting work on the context of teaching and learning.

Let me close with two specific examples of what I mean. One, Washington should fund a greatly enlarged and more useful national assessment of educational progress, the kind recommended by the Alexander-James group. We need to know more—much more—about how our students are doing.

Two, Washington should underwrite the research and development costs of the National Board for Professional Teaching Standards. Gainsayers note that there is no precedent for such an undertaking. I would suggest, so much the better. It is time to establish new precedent. It is time for the Federal Government to do something both useful and bold to improve education.

Thank you for the opportunity to appear before you this morning. I have made copies of my testimony available on the table against the wall.

[The prepared statement of Denis P. Doyle follows:]

TESTIMONY OF

DENIS P. DOYLE

SENIOR RESEARCH FELLOW

THE HUDSON INSTITUTE

APRIL 20, 1988

BEFORE THE HOUSE SUBCOMMITTEE ON SELECT EDUCATION

THE HONORABLE MAJOR R. OWENS, CHAIRMAN

The statements contained in this testimony do not necessarily reflect the views of the Hudson Institute, its staff or trustees.

Mr. Chairman, members, good morning. I am Denis P. Doyle. The record should show that until April, 1981, seven years ago this month, I was the Chief of program planning in the office of the assistant secretary, office of research and improvement, US Department of Education; before that I was as assistant director of the National Institute of Education, US Office of Education.

Since that time I spent five years as director of education policy studies at the American Enterprise Institute, and for the past two years I have been a resident fellow in education at the Hudson Institute. I have had the opportunity to follow the federal government's role in education research since its modern inception in the National Institute of Education. It would serve no good purpose to comment on the checkered history of education research except to observe that most policy makers -- particularly members of Congress -- are underwhelmed by its findings.

It is not telling tales out of school to note that education research has much promise but only limited results. It is about the promise of education research, however, that I want to talk today. In the limited time available to me I want to discuss education research from a business perspective.

As anyone who reads the daily papers knows, America faces an unparalleled competitive challenge today. The industrialized democracies -- particularly Japan -- have reached levels of economic output without precedent, and the United States finds itself in an unfamiliar position: we are hard pressed to compete.

The reasons for our declining competitiveness are many but the keys to restoring it are few; as it happens these keys hang from a single ring. The keys are education -- elementary, secondary and postsecondary, public and private -- training, formal and informal, on-the-job and in-school, and attitudes toward education and work. The key to improving each of these is research. As research works in the natural sciences, so too can it work in education and training. That results to date have been of limited efficacy should only encourage us to redouble our efforts.

Let me remind the committee that good education research is not arcane, jargon laden material prepared for publication in little read and less noted academic publications. Good education research should have as its ultimate objective the improvement of practice.

In that connection, education research should help restore our competitive position. This means that education research should be both bigger and better; it should be more generously funded by the Congress, and it should produce more useful results. We need education research of higher quality and higher yield.

Let me turn to two efforts I have been involved with over the past several years. The first is the policy statement of the Committee for Economic Development, Investing in Our Children: Business and the Public Schools. I had the opportunity and privilege to be director of that study: my co-director was Marsha Levine, now with the American Federation of Teachers. Let me quote from that report:

> Private industry could not succeed with a data collection system and research base as weak as this nation has in the field of education. Yet, it is only through education research and data collection what we can expect to identify ways and means to increase the output of the education system. The original purpose of a federal role in education was as a national repository of information, and the first ... Department of Education ... was designed to accomplish that objective.

More recently, I have completed a book with the CEO of Xerox, David Kearns. It will be released May 10, 1988. Titled Winning the Brain Race: A Bold Plan to Make America's Schools Competitive, Kearns and I argue that without adequate research funding American schools cannot enter the 21st century. By way of illustration look at the Federal Government's expenditures on education research. With the most generous definition of "education research" it is hard to find one hundred million dollars in the federal budget. Contrast that to the amount we spend operating the nation's elementary and secondary schools: $150 billion per year. Contrast that to the amount that a corporation like

Xerox spends on research: $700 million per year.

The example of Xerox is apt. As the developer of plain paper copying, Xerox once appeared impregnable to market challenge; but Xerox was severely buffeted by competitive forces in the 1970's and early 80's. Only recently has Xerox recovered market share from the Japanese, an accomplishment almost without precedent in this period of global competition.

That accomplishment was made possible in large part by research, both into product development, manufacturing and distribution, as well as internal management and organization.

The nation's public schools face similar challenges today. Without the underpinnings of sold and effective research they will be in even more serious trouble. Why should the federal government underwrite this activity? Because no other unit of government has the scale, scope or incentive to do so. Each level of government should do what it does best. What the federal government should do best is data collection, research and development with national implications.

What should federal priorities be? They should be three, the most important ones facing the nation today: content, competence and context. The issue here is not to establish a national curriculum, but to identify what it is every American should "know and be able to do." That is in the first instance a descriptive not a prescriptive exercise.

Second, standards of performance for teachers and students should be identified. Again, at the federal level, this should be descriptive, not prescriptive. States and localities can adopt or not adopt them as they see fit.

Finally, in a diverse nation of immigrants, one comprised of strikingly different regions and interests, it is important to examine the "context" in which content is imparted and competence acquired. Not everyone learns in the same way, not all good teachers teach the same way. The federal government could support diversity and variety in teaching and learning, as it exercised its centralized responsibility to underwrite useful research, by supporting work on the context of teaching and learning.

Let me close with two specific examples of what I mean. One, Washington should fund a greatly enlarged and more useful National Assessment of Educational Progress, of the kind recommended by the Alexander-James group. We need to know more -- much more -- about how our students are doing. Two, Washington should underwrite the research and development costs for the National Board for Professional Teaching Standards. Gainsayers note that there is no precedent for such an undertaking. So much the better. It is time for the Federal Government to do something both useful and bold to improve education.

Thank you for the opportunity to appear before you this morning. Copies of my testimony are available.

Mr. Owens. Thank you. I want to thank all of the panelists.

I was going to point out before we started questions that we were joined by two colleagues from the Education and Labor Committee, Mr. Sawyer and Mr. Goodling, but they had to leave already. I think I will let the record note that they were here.

I would like to begin with a question to Mr. Semple and Mr. Doyle. You both speak with great force, very emphatically, about your conclusions, and I, needless to say, was very impressed by "Children in Need" and have quoted it quite frequently. You don't seem to hesitate or equivocate. You believe in your conclusions. Did you find you really had adequate research to back up these conclusions? You were satisfied that the conclusions you reached are supported?

Mr. Semple. I would say that no one is ever truly satisfied with what they can find. To the extent that what we did find led us to these conclusions, we were definitely satisfied. We felt there were certainly a lot of holes that needed to be filled.

I think the questions raised today as to why aren't programs duplicated when other areas develop decent returns, are very legitimate questions which we feel should be further answered. This may not be the only programmatic area that develops decent returns.

I think Dennis' point, that we feel that this is a subject that needs continual, competent research, is beyond question. I think Dennis has eloquently pointed out the fact that the business community is deeply concerned about the future prospects for the Nation in terms of its human resource capability. There is no question about it. I think what he is producing with Mr. Kearns is an example of that concern and adequately addresses many of the essential questions in the research area.

We were satisfied with the one conviction that education does deliver very important returns that are quantifiable, and that there are certain programmatic areas which have been shown to do that. What it leads us to believe is that there are other ones that can do that as well. It may not only be in education. It can be in health and other auxiliary services, particularly in the area of the needs of poor children, but our conviction comes from a couple of sources.

Mr. Owens. Have you found, since the publication of your booklet and your conclusions, have you found any researchers commenting, educators and authorities in the field commenting negatively or positively? What has been the reaction of the professional——

Mr. Semple. Well, there are some areas we did not find returns. It was in those areas we got the most negative comments. For example, I had the, perhaps in retrospect, interesting job of looking at the returns on vocational education. That was one area where the committee felt it had some province and knowledge, and found that the returns were not up to par. I have had lots of negative comments on that one.

On the other issues, the answer is no. We have uniformly found support. There is skepticism, even in the business community. In fact, one of the areas we find most difficult to deal with are those skeptics in the business community who did not walk their way through a process such as our committee did.

But we find that when you deliver the information in the way that it was delivered to our committee, particularly by Dennis and the researchers that we employed with us, that they are easily convinced. So in sum I would say from the education and research community it has been something of, I think, a very positive development.

Mr. **Owens**. Dr. Jones-Wilson, would you say that or were you implying that we really don't need so much more research and study in the area of the education of the disadvantaged; what we need instead is to implement what we know already? For example, some of the conclusions of "Children in Need" certainly support what you have said about we have a lot that works but we are not willing to spend the money to implement it. Are you saying that what the Government might contribute is some greater resources toward the implementation of things that work already?

Ms. **Jones-Wilson**. Yes, I am saying both. We need continuing research on what we do, but we need more money——

Mr. **Owens**. Excuse me. Could you move the mike around?

Ms. **Jones-Wilson**. Oh, yes. I'm sorry.

I am saying both. We need continuing research on what we do, but yes, I am saying that the Federal Government could spend more money in terms of implementing what we know we ought to be doing.

Mr. **Owens**. So our laboratories, we have centers that are funded now, we have laboratories, we have some other entities but the laboratories are supposed to implement and do certain things as a result of research that has been done. You said we need to expand that effort and focus it more?

Ms. **Jones-Wilson**. We need to focus it on those persons and institutions that are actually doing a sound job for minority people. Again, the labs and centers are fine structures but I don't believe that their primary interest is in the increased achievement of minority children. It seems to me that I remember reading about only 5 percent of their budgets and programs are addressed to the needs of minorities, so it seems to me that those people who have proven track records at improving the achievement of minority children, including research on what they are doing, that those people need to be supported.

Mr. **Owens**. Excuse me. You said you read somewhere where only 5 percent of the budget was addressed to——

Ms. **Jones-Wilson**. Yes, and I don't remember where I read it but I think I remember reading that. I don't remember the source, but it seems to me that those centers and labs are not doing the job that needs to be done. Instead, implementation funds need to go into those programs that are actually addressing the needs of minority children.

For example, some of the effective schools are successfully educating poor children, and it seems to me that those programs could be studied and replicated. It seems to me that Comer's project in New Haven, CT, could be studied and replicated, but more money could be spent on implementation of what we already know works. That would be helpful in reaching the children and teachers who are actually in the classrooms today.

Mr. **Owens**. So what would be your comment on the proposal of the administration to set up a new study for the education of the disadvantaged? What should be the thrust of that, or is that then—a new center, I am sorry, not a study. A center for the study of the education of the disadvantaged, that is going to be a new initiative. I think they are proposing $300,000 to $400,000 to do that and throw in bilingual education at the same time.

Ms. **Jones-Wilson**. Well, I would be a little skeptical about that, sir, because it seems to me that we already know a great deal, so I would feel that that money would be better spent in terms of implementing what we already know works. Again, I will requote Terrel Bell. He says that we have a 20-year history of knowing which Head Start programs, which chapter 1, title 1 programs, which Job Corps programs work.

It seems to me that if we would replicate those programs—again, implementation—and if we would tie that to linkages to the business community—for example, it seems to me that people who are in some of these training programs, if they knew that there was a job at the end of the rainbow, that they would be very willing to learn what is being taught in school because they know that it will lead to a job. Most people want to work. They want to be employable, so we need not only linkages between research and implementing the research, and between higher education and the public schools, but we also need linkages between the programs in school and the business community so that young people can believe that they will be employed when they leave school.

This is one of the problems today. They don't believe that they will be employed. They don't see jobs in their communities. They don't see adults in their communities working, and so it seems to me that these linkages could be very helpful, but the point here is, articulation and implementing what we know.

Mr. **Owens**. Dr. Coleman, in the rhetoric there has been an emphasis on the need for the Federal Government to intervene to guarantee opportunity for all the children of American, and the implication of that was, the thrust should be to help the disadvantaged. All along that should have been happening. We don't know why it hasn't been happening, but the worst situations were to get the most attention.

But in your testimony you pointed out something which I think is very significant: Failure to deal with some of these worst situations might have helped us deal with the situation in general. According to your testimony, we have a problem even with the very best that we produce. If I understood you correctly, you said the sampling of science students, when you had the comparisons you only tested those who were in sciences. It wasn't this broad, heterogenous population of American bringing down the test scores. It was the students who were studying science who were tested in those specialized areas, with students in other countries who were studying those sciences. Am I correct?

Mr. **Coleman**. That's correct, and in the lower grades where it was the total population of students, if you looked at the upper quartile, the upper 25 percent in the United States compared to the upper 25 percent in other countries at age 15, again we were in the same position, so it is not a matter of the heterogeneity of the population which is bringing down our test scores. What is happening has to do with everything across the board. That is, I think it is a matter of education in general, and again, as I said before, I don't think it is a matter simply that can be laid at the doorstep of the schools. It is a matter having to do with the relation between the schools and the families, I think, more than anything else.

Mr. **OWENS**. Would you say that we should take a look at research and perhaps experimentation which has an impact on families and communities, starting with the school as a base?

Mr. **COLEMAN**. Yes, I would certainly think so. I observed at an Hispanic school not very long ago, a program that exists in that school called the Family Study Institute, in which parents, most of whom could not speak English, were being taught how to help their children do homework—that is, how to provide the kind of setting and the kind of circumstances which would make it possible for their children to do well in school.

So it seems to me that here were a set of parents who were very eager and very willing to devote time and attention to their children, and what that program was doing was essentially trying to help those parents help their children. Now I think in the more affluent classes, I think we have a somewhat different problem. We have the problem of people paying more attention to themselves than to their children.

Mr. **OWENS**. Mr. Semple and Mr. Doyle, they reached conclusions, had some very strong statements in here about the need to invest in parent education and parent involvement. In the process of preparing for the reauthorization of the extension of the Elementary and Secondary School Assistance Act, we did discuss this subject at some length, at least wherever I was, in hearings with teachers and administrators and among my colleagues. I discussed the need to be more concrete about an investment to encourage parent involvement and parent education, and I always got a negative reaction in terms of something concrete.

The rhetoric was okay. Everybody agreed that we should have more of it. When I said, "What percentage of the budget? Would you be willing to dedicate some percentage of the budget, even one-half of 1 percent, one-tenth of 1 percent?" I got an answer of, "No, we really don't think that is necessary," which as a former administrator myself, I know if you are not willing to put it in the budget, that means you don't really take it seriously.

Mr. Timpane, would you please comment on how years and years of research in this area has come to certain conclusions, and yet we really have made no effort? There is a general feeling that after you take care of all of the other problems in education which are in great need, then maybe we can provide something in that area. Is it important enough to be looked at in terms of, it must run parallel, some effort to deal with parent education, parent involvement, must run parallel to everything else that we are trying to do?

Mr. **TIMPANE**. Well, in my opinion, yes. We have changed our perspective on parent involvement two or three times in the past couple of decades, and each time it has been an improvement. There was a——

Mr. **Owens**. The Federal legislation doesn't show that. We backed away from our commitment in legislation.

Mr. **Timpane**. There was a time when we thought of parent involvement in political terms and there was a time when we thought of parent involvement in "help the teacher" terms, and now I think we are thinking about parent involvement as partnership. I think this gets to the points that Jim Coleman is trying to raise, that the parents and the schools depend on one another critically and have to cooperate across the board in the enterprise of raising young children, or else neither will succeed.

So I think our perspective on what kinds of parent involvement we want has been developing rather steadily. Now how to work that into a program and how to decide what the budget of it is, I agree with you that what you are not willing to put in a budget, people are likely to think you don't take seriously. It may be that some experimentation and further exploration is necessary, and some money earmarked for such I think would bring forth—with the proper guidelines, to be sure we are working toward parent-teacher-school partnership—could bring forth some very interesting initiatives in development.

Mr. **Semple**. I wonder if I could comment briefly on that?

We ultimately concluded that the problems of disadvantaged, educationally and economically disadvantaged children, were that the chief determining factor was the lack of good parenting as such—whether or not the children existed in a family where drugs and alcohol did not exist, and where the child was nurtured, encouraged, and disciplined.

Now many of the trustees of the committee had grown up in families where this had been provided, whether they grew up in well-to-do families or not, and they started out with the conviction that this was just a natural thing, but we discovered in the course of our research that good parenting doesn't just happen. Anybody who has had a child obviously realizes that raising children is perhaps the toughest job any of us ever undertake, and for many of these children whose mothers are teenagers, they just aren't aware of all the things that go into adequate parenting.

We found some examples where there was some indication that you could do something about it in a programmatic context. The New Futures School in Albuquerque was one such example. The relationship to the school is a very difficult one. It raised so many issues, and I remember talking to Mr. Butler about it. I said, "You won't believe what we are going to run into when we make this statement," and it is in fact true. Every time we open the statement, one aspect of this issue descends upon us, whether it is day care of parental leave or this aspect or that aspect.

What we concluded is that education is the mix of all these things, and what we now have is this hybrid system where it is all scattered all over the place and is not directed to the whole environmental need of children. That is a true challenge. That is a true challenge, how do you bring these things together, but it is the one ultimately we felt we had to achieve.

Ms. **Jones-Wilson**. Mr. Chairman, may I say something on that? For 2 years now I have been involved in a voluntary effort which is called the National Conference on Educating Black Children. One facet of that effort is that we are trying to bring together a network of interested persons to improve the education, and this includes parents as well as teachers, administrators, policymakers, community, and so forth, so we recognize the need for bringing parents intricately into the education of their children. We have had two national conferences, and a third one is expected to materialize in June at Hunt Valley, MD, but what we are trying to do here is get these people working together, without rank or without hostility, to work out the ways in which they could be helpful to each other.

Now to get back to you, if there were Federal funding for some kind of effort like this—the effort has already begun—then yes, we could find out what is working in our voluntary efforts or similar voluntary efforts to get this network of people working together in traditional ways such as the PTA, but also in new ways. Mr. Timpane has said we have been through some of that—parents as teacher helpers—but all the ways in which parents and schools could cooperate to improve the education of our children.

Mr. OWENS. Thank you. I have no further questions.

Mr. Bartlett.

Mr. BARTLETT. Thank you, Mr. Chairman.

In reviewing the testimony and in listening to the testimony, one thing that struck me was the absence of a lot of discussion and indeed, with the exception of Mr. Doyle, I think—I may be wrong on that—of any discussion at all, with the exception of some reference in Mr. Doyle's testimony, to any sort of major impact that Federal research into education has had on education or on education research, and specifically the Office of Educational Research, formerly known as the National Institute of Education.

Now in sitting here thinking, I am wondering as to whether I missed it or whether it was understood. I think of Dr. Jones-Wilson's testimony, eloquent testimony on the need for dissemination, taking what we already know and getting it into the classroom, or Mr. Semple's testimony with regard to preschool, or Dr. Coleman's testimony with regard to the need for comparative studies internationally, or Mr. Doyle in terms of teacher standards.

I suppose my question is a broad one, then: In your judgment, does in fact today the Office of Educational Research—that is to say, that whole range of both Federal education research through labs and centers and otherwise—does that have a major impact, in your judgment, on major and useful educational research in the country today, or would you assess it to be a minor impact or any impact at all? How would you assess it, and can you point to specific ways in which OERI has had an impact on a major research issue?

Mr. TIMPANE. Surely. I can begin on that, I believe. The first point, which will be certainly stressed by other witnesses, is that we cannot ignore the steadily decreasing purchasing power of the resources that OERI has had throughout its existence and I can testify, from the time of NIE, that NIE had throughout most of its existence. With only a fraction of the purchasing power that it had 13 years ago, we cannot expect miracles.

That said, I believe that there have been several accomplishments. I will list two. My colleagues might list others.

First, I believe that the reconstruction and recompetition of the research and development centers, accomplished 3 or 4 years ago, redefining their missions, involving a great many more college and university centers than had previously been involved, has been a material strengthening of the institutional base of research and development, and it has picked up on some emerging new issues in education, such as Education and the Economy, which is a center that my college happens to have, that I think was a very constructive development.

I would agree with the implication of Chairman Owens' question, that the absence of a concentrated research and development effort in the area of education of the disadvantaged was a big hole which is now being corrected, so I think that that is an accomplishment. That is, working with fewer dollars than were there before, OERI has managed, in my judgment, to create a stronger and broader set of institutions.

Secondly, I believe I would concentrate in the areas of assessment and statistics, where I believe the efforts of OERI have been most successful in the past several years. I think the national assessment in particular stands at a level of influence and credibility and provides a quality of information about the status of achievement in our schools which was simply not there previously.

Mr. **Bartlett**. Mr. Timpane and the other witnesses, I apologize. I have just been called and told that if I don't appear at the Rules Committee in 5 minutes, I won't be permitted to appear, so I want to do that, but I would like to leave the question on the table for the chairman's review. I will review the comments.

Mr. **Semple**. I would like to comment on that. Once again, I should say that we are not experts on translating what the Department of Education or OERI does and how it shows up in the field. One classic example is, when we wanted the answers to questions, we went to people like Michael Timpane to get the answers. To the extent that he was funded and subsidized out of OERI, we have nothing but the greatest of kudos, because without that kind of interpretive analysis and ability to deal with this, we would have been nowhere. We would still be sitting in New York, looking at each other, and the same is true for a lot of other research, that it takes good people out in the field to know what to do with the data and to be able to interpret it in a way that is presentable. Fortunately, we found people who knew how to relate it to a business mentality that we could understand.

My comments were generally that, generally speaking, it doesn't do that, but fortuitously for us, we found individuals, perhaps—and I have no way of knowing how much they were sponsored by OERI or other educational research—that were capable of doing it. That needs to be followed, encouraged and expanded.

Mr. **Owens**. Thank you very much. I think on that note, we can't end with a more positive answer to that question. I want to thank all of you, and hope that you will respond to some further questions that we may submit to you as a result of your oral testimony and your written testimony today. Thank you for coming.

Our next panel is Ms. Mary Hatwood Futrell, the president of the National Education Association; Mr. Albert Shanker, president of American Federation of Teachers; Eleanor Chelimsky, the director of the Program Evaluation and Methodology Division of the General Accounting Office; Alan C. Purves, the director of the Center for Writing and Literacy, State University of New York.

We understand that Ms. Futrell has a problem and has to leave right away for a flight, so if there is no objection I would like to take Ms. Futrell's testimony and question her immediately, and then we will proceed.

I'm sorry. Mr. Hayes.

Mr. **HAYES**. Yes.

Mr. **OWENS**. Did you have any questions?

Mr. **HAYES**. I will hold the questions I had for the other panel for this one. Thank you.

Mr. **OWENS**. OK.

Ms. Futrell.

STATEMENT OF MARY HATWOOD FUTRELL, PRESIDENT, NATIONAL EDUCATION ASSOCIATION, ACCOMPANIED BY GARY TIMMONS, LEGISLATIVE SPECIALIST, GOVERNMENT RELATIONS

Ms. **FUTRELL**. Thank you. Chairman Owens—and I was going to say members of the subcommittee, but everyone has departed—please accept my apology for having to do what we describe as testify and run. I do have a flight I have to catch, so with your permission I would like to ask that Mr. Gary Timmons be allowed to respond because I will have to leave immediately upon testifying. I am Mary Hatwood Futrell, president of the 1.9 million members of the National Education Association.

The subcommittee has asked whether the Nation's research agenda reflects America's key education priorities. A more fundamental question is whether America's education priorities reflect the conclusions of educational research. A recently study by Rand's Center for the Study of the Teaching Profession concluded that most education reform legislation shows strong ambivalence over whether teaching is a knowledge-based professional activity that demands autonomy, or semi-skilled work to be regulated at every turn.

Further, the study revealed that teachers were rarely brought into the reform process. Had lawmakers taken more time to consult the available research, they would have found a strong basis for involving teachers in the decisionmaking process, both in broad education policy and in the day-to-day decisions that affect the quality of education in individual classrooms.

NEA believes policymakers should work in concert with the education community and the research community to develop education policies that address the need to grant greater autonomy to education professionals, the need to devote greater attention to the needs of students, especially those who are at risk, and the need for greater innovation and experimentation at the local level, focused on thinking skills, collaboration skills, and basic skills needed to engage in lifelong learning.

The Federal Government, I believe, has a number of important responsibilities in the area of education research, including but not limited to collecting and disseminating statistical information on schools, determining if national priorities in education are on track, and determining whether federally funded education programs carry out their objectives effectively.

A basic requirement for conducting good research is making sure we have adequate funding, yet of the $61 billion spent by the Federal Government on research in fiscal year 1987, more than 60 percent went to military research and only two-tenths of 1 percent was spent on education research. If we are serious about making significant and effective changes in our system of public education, the Federal Government must enhance education research efforts.

A second basic requirement for quality educational research is protection from politicization. The U.S. Department of Education, under the present administration, has often funded research designed to advance a political rather than an education agenda. A recent example is a report produced by the department which characterizes efforts to reduce class size as, and I quote, "a waste of money and effort." The report was evidently designed to give comfort to policymakers in States and localities with class sizes that are far too large to provide quality education, and it has clearly showed a bias that the only valid measure for educational improvement is improvement on standardized tests.

Congress can help shield educational research from politicization by ensuring a diversity of research efforts and maintaining the process of competitive grants and contracts administered through rigorous and independent peer review. In addition, the Federal Government must support a balance in education research, including a balance between useful knowledge that can be readily implemented in the classroom and basic research which focuses on broader pedagogical issues.

Finally, educational research must be conducted in close cooperation with public education employees in school settings. By maintaining a structure that keeps research close to the schools, such as in the current structure of labs and centers, the Federal Government can help ensure that education research is directed toward productive ends. Moreover, ongoing involvement in research efforts by classroom teachers helps them stay on the cutting edge of changes in education, keeps them interested and excited about teaching, and consequently makes them better teachers.

For example, a few years ago NEA initiated the master in learning project that has helped put education research to use in the classroom. One aspect that has helped make this project successful is the high degree of collaboration between teachers involved in the Master in Learning Program and federally funded research labs and centers.

At each project site, the regional labs have committed to providing 3,000 hours of in-kind services to help teachers make sure that they have the most recent and the best research as they try to find more effective ways to teach our young people. As a result, researchers have become more than just observers. They have been active participants in efforts to change the approach to teaching and learning.

In conclusion, NEA urges Congress to continue and expand its support for research that evaluates reforms that have already been instituted, that gives greater, more concentrated attention to issues that directly impact the quality of instruction, that is presented in a user-friendly manner—meaning that we would not have to wade through 40 or 50 pages before we come to the results—that will encourage and facilitate curriculum development and curriculum improvement, that defines more precisely the knowledge base that undergirds the science and the art of teaching, and that aims to uncover the most effective means of meeting the education needs of special needs students.

I again thank you, and I apologize for having to run but I have about 30 minutes to get to the airport. Thank you very much.

[The prepared statement of Mary Hatwood Futrell follows:]

LEGISLATIVE INFORMATION

TESTIMONY
OF THE
NATIONAL EDUCATION ASSOCIATION
ON
EDUCATION RESEARCH

BEFORE THE
SELECT EDUCATION SUBCOMMITTEE
OF THE
COMMITTEE ON EDUCATION AND LABOR

U.S. HOUSE OF REPRESENTATIVES

PRESENTED BY
MARY HATWOOD FUTRELL
NEA PRESIDENT

APRIL 20, 1988

ARY HATWOOD FUTRELL, President • KEITH GEIGER, Vice President • ROXANNE E. BRADSHAW, Secretary Treasurer
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Mr. Chairman and Members of the Committee:

I am Mary Hatwood Futrell, president of the National Education Association which represents 1.9 million education employees throughout the nation in elementary, secondary, vocational, and postsecondary schools. I appreciate the opportunity to talk with you today about the need to enhance federal education research programs that make a significant contribution to the improvement of instruction in our nation's public schools.

The winds of change are blowing with gale force. We've seen a major transformation in the work place and intense competition in the world economy. We've seen an ever-accelerating pace of both technological and societal change. We've seen dramatic changes in the demographics in this country. Like all other institutions, these forces have dramatically altered the way the public schools operate and must operate in the future. At the same time, public support is growing for dramatic changes that will help America's schools thrive in this climate. Now and in the future, research about learning and teaching will be of prime importance.

Having good information about the learning styles of students and the effectiveness of various educational policies and practices is essential to making meaningful decisions about education. But up to now, the objectives of education reform have not always been either clear or pure. Policymakers — including Members of Congress, governors, state legislators, and others outside the education community — have proposed, and in many cases enacted, education changes that are driven by political, rather than educational, forces.

Many states have moved to impose new requirements on teachers without taking a hard look at the dynamics of teaching-learning process. Many states have imposed new testing requirements on students without considering effective ways to measure the thinking skills, as opposed to factual information, students will need to be successful in the future. Many states have provided funds for computers without clear direction on how computers can be effectively used to enhance the education of students.

Today, American business and political leaders, economists, social scientists, as well as the education community, are looking at ways to use education to shape, rather than adapt to, the changing economy. Adding value to American labor will increasingly mean a change in the current ponderous hierarchical structure of American business. In order to make American business flexible enough to develop and capitalize on new products and services, managers will have to be facilitators, employees will need to be innovators, and Americans in every endeavor will need to be more creative. If we want to excel in the current economic climate, schools, too, will need to be more innovative, creative, and responsive to the will of consumers.

At the same time, it is widely recognized that we, as a nation, must do a better job of educating students at-risk, and — as importantly — establishing and maintaining programs that meet the physical, social, and emotional needs of students. Unless the human needs of children and youth are met, we cannot hope to make significant progress in their intellectual development.

The Subcommittee has asked whether the nation's research agenda reflects America's key education priorities. A more fundamental question is whether America's education priorities reflect the conclusions of educational research. A recent study by Rand's Center for the Study of the Teaching Profession concluded that most of the recent education reform efforts reveal lawmakers' ambivalence over whether teaching is a knowledge-based professional activity that demands autonomy or semiskilled work to be regulated at every turn. Further, the study revealed that teachers were rarely brought into the reform process. Had lawmakers taken more time to consult the available research, they would have found a strong basis for involving teachers in the decision-making process, both in broad education policy and in the day-to-day decisions that affect the quality of education in individual classrooms.

In order to get education reform back on track, NEA believes policymakers should work in concert with the research community to develop education policies that address 1) the need to grant greater autonomy to education professionals, 2) the need to devote greater attention to the needs of all students. especially those who are at risk, and 3) the need for greater innovation and experimentation at the local level focused on education programs that help develop thinking skills, collaboration skills, and basic skills needed to engage in lifelong learning.

NEA, its affiliates and members, have already initiated many new developments in effective teaching methods, materials, cross-discipline curricula, etc. But as new ideas are tested in the schools, there must be empirical methods established to assess the effectiveness of these new approaches. Educational research, conducted by various individuals and organizations, helps provide that empirical basis for educational decisions.

The federal government has an important responsibility in the area of research. First, the federal government is the appropriate locus for collecting and disseminating statistical information on the schools. Second, the federal government has a well-acknowledged responsibility for identifying national priorities in education, and research collected at the national level can help determine if these priorities are on track. Third, the federal government has a responsibility to the American people to ensure that education programs funded by the federal government carry out their objectives effectively.

There are a number of basic things essential to conducting good research. The first, quite simply, is adequate funding. In Fiscal Year 1987, the federal government spent some $61 billion for research and development. Of that amount, more than 61 percent went for military research, more than 9 percent for health, more than 8 percent for energy, 6.6 percent for NASA, and 0.2 percent for education. If we are serious about making significant and effective changes in our system of public education, it is absolutely essential that we provide the resources to take a hard look at what the public schools are doing right or doing wrong, and what we need to do better. The federal government — as a part of its responsibility for identifying the national interest in education — should enhance research efforts in the area of what we can do better, and maintain those efforts so that we are always on the path toward improvement.

A second basic requirement for quality educational research is that it must be protected from politicization. The U.S. Department of Education, under the present Administration, has often funded research designed to advance a political, rather than an educational agenda. A Department of Education report, "Class Size and Public Policy: Politics and Panaceas," which characterized efforts to reduce class size as "a waste of money and effort" is an excellent example. The report was clearly designed to give comfort to policymakers in states and localities with class sizes that are far too large to provide quality education. The nation's newspapers, which drive education reform efforts as much, if not more, than educational research, give a clear indication of the purpose of the study: "Smaller class may not help child learn" (USA Today); "Reducing Class Size A Waste, Study Says" (St. Louis Post Dispatch); "Paring Class Size Costly, Futile, U.S. Report Says," (Los Angeles Times); "U.S. study: Big classes not so bad," (Atlanta Constitution)."

Many newspapers did not report an important conclusion of the study that reducing class size to fewer than 20 students can produce significant improvements in student achievement. It stands to reason that, even if our society is unable or unwilling to afford to reduce class size below 20, reducing class size from 30 to 25 is, perhaps not a panacea, but a step in right direction. Few, if any, of the newspapers reported on the vast amount of research demonstrating that smaller class size can bring about more individualized instruction, more academic enrichment, increased interaction among pupils and between teachers and pupils, more small group work, and fewer discipline problems. The Department's study revealed a strong bias that the only valid measure of education improvement is standardized achievement tests.

There are numerous examples in recent years of Department of Education-funded research to advance a political agenda. The Secretary of Education has funded a number of federal research grants to determine what the most effective methods of promoting vouchers might be, taking for granted the idea that vouchers would improve education — a premise that has by no means been proven. Congress can help shield education research from politicization by ensuring a diversity of research efforts and ensuring a balance of field- and Department-determined research agendas. Toward this end, the process of competitive grants and contracts — administered through a process of rigorous and independent peer review — ensures a healthy environment for the generation of creative research ideas.

Third, educational research must involve a balance between applied research — that is, useful knowlege that can be implemented in the schools in a short period of time, and basic research, which focuses on questions of how children and adults learn, how best to measure what is learned, and how to improve the substance of what is taught. The educational research effort must maintain a balance between support for individual researchers and institutions and agencies because good research emanates from both sources. A continued balance is needed of research to benefit elementary, secondary, and postsecondary education. In addition, greater emphasis is needed on research in the area of early childhood development, particularly as it relates to developing appropriate curricula for preschool-aged children. Balancing these elements within the current structure is far more productive than creating a whole new structure for educational research.

Finally, educational research must be conducted in close cooperation with public education employees in a school setting. Current practitioners are best equipped to identify needs in terms of materials and methods for dealing with classroom management, programs that facilitate discovery rather than simply rote memorization, education of students at-risk, and other aspects of education that need attention. By maintaining a structure that keeps research close to the schools, such as the current structure of labs and centers, the federal government can help ensure that education research is directed toward productive ends. Education research is of little use if it is trapped between the covers of an esoteric journal. Moreover, ongoing involvement in research efforts by classroom teachers helps give them the sense that they are on the cutting edge, keeping them interested and excited about teaching, and consequently making them better teachers.

A few years ago, NEA initiated a project that has helped put education research to use in the classroom in a very direct way. The NEA Mastery In Learning project involves 27 sites representing a broad cross section of school sizes, geographic locations, and demographic representations. The key focus of the Mastery In Learning project is to empower teachers so they are effectively involved in decisions that relate to educational practices in the classroom.

One aspect that has helped make this project work is the high degree of collaboration between teachers involved in the Mastery in Learning program and federally funded research labs and centers. At each project site, the regional labs have committed to providing 3,000 hours of in-kind services. As a result, researchers have become more than just observers; they have been active participants in efforts to change the way we approach teaching and learning. Research participants in the program have provided inservice training, conducted workshops on locally determined priorities — such as integrating writing into the curriculum, integrating problem-solving and critical thinking into the curriculum, etc. — and they have worked closely with teachers to provide information on effective methods for assessing student progress. In short, through the Mastery in Learning program, researchers are involved in an ongoing effort to provide practicing teachers with the latest, best available information on teaching and learning in order to help local schools accomplish specific goals in education improvement. NEA believes that over the next few years, local school districts should be involved in a wide range of innovative and experimental projects with an eye toward preparing students to adapt to a changing workplace and a changing world. But we must avoid the pitfall of free form experimentation or innovation without specific goals. Education research, particularly as it takes place in federally funded labs and centers, will help keep that experimentation on track.

There clearly is much yet that needs to be done in this area. NEA believes that students would derive lasting benefits from research:

- o that evaluates reforms that have already been instituted;
- o that gives greater, more concentrated attention to issues that directly impact the quality of instruction;
- o that is presented in a "user friendly" manner;
- o that will encourage and facilitate curriculum development and curriculum improvement;
- o that defines more precisely the knowledge base that undergirds the science and art of teaching; and
- o that aims to uncover the most effective means of meeting the education needs of special needs students, including the handicapped, those

with limited proficiency in English, disadvantaged students, and recent immigrants.

In conclusion, NEA commends this Subcommittee for its attention to the important issue of the need for ongoing quality educational research. Education employees look forward to a longstanding working relationship with the research community, and we urge the Congress to continue and expand its support for a educational research committeed to a single goal: to educate all students while remaining faithful to the highest standards of excellence.

Thank you.

Mr. OWENS. Thank you for taking time out of your busy schedule. We are sorry you do have to run. Mr. Timmons will answer any questions, I assume?

Mr. TIMMONS. Yes.

Mr. OWENS. Mr. Shanker.

STATEMENT OF ALBERT SHANKER, PRESIDENT, AMERICAN FEDERATION OF TEACHERS

Mr. SHANKER. Thank you very much for this opportunity to express the views of the American Federation of Teachers, representing 665,000 teachers and educational workers across the country. I can't think of a more important educational issue before us. It really isn't that hot before the Nation, but I can't think of anything else that is more important in terms of what will happen with the future of education.

I will not read my testimony. You have it. I do want to make a few points.

First, I want to underscore what I think almost everybody else said, and that is that the amount of investment by the Federal Government in this area is a pittance and needs to be substantially increased.

Secondly, I think we need to take dissemination seriously. Schools and educators are notoriously anti-intellectual. They are driven largely by political forces. New superintendents come in. It is important for them not necessarily to do the right thing, but not to do the same thing that the previous superintendent did before. They will get rid of the previous programs, whether they were good or bad, because that is what is expected in a new administration.

Somehow we have to turn this around, and we need to spend substantial sums of money on that. One example of an outstanding piece of work that was done, and I think there is universal agreement, was the publication of a report called "A Nation of Readers." It came out of one of the centers or the people there, the result of a combination of Federal monies with some private foundations, and not a very lengthy booklet. There were efforts to distribute more copies of the booklet, but anybody knows that whether you distribute 10,000 or 20,000 or 30,000, that is not much dissemination when reading is so fundamental and we have 2,400,000 teachers out there.

It seems that what we ought to be thinking in cases of dissemination is something that would be on the scale of what the old agricultural dissemination centers were. When you really wanted farmers to increase their output, you didn't just put out a couple of little booklets and hope that a few farmers would read them. You put stations out there with people who could move from farm to farm and talk to the farmers, and it seems to me that what is needed out there, whenever some important piece of work like that comes out, would be regional conferences or perhaps State-by-State conferences which involve at least one or two teachers in each school and one of the supervisors, a number of people who can then share that information with others within the school.

Now, third, in terms of dissemination and also in terms of discovery, I think that we keep thinking about research as being done in labs, centers, or universities, or by people with grants who are in this sort of business, but in almost any other field the actual practitioner usually finds out a lot. Doctors find out a lot when they treat patients and they see that some patients seem to respond to something

We do not have a very good approach to encouraging teachers at the school level to report on what it is that they have found that works for them, and it seems to me that with the technology that is now available, that we ought to encourage the creation of some sort of a national data bank which individual teachers could dip into. You have them in almost any other field.

If you are in law, if you are in medicine, if you are in investment or any other field, there are ways in which people can deposit information, they can pull information out, they can even leave little notes there telling you how valuable or not valuable the information was to them. A system which allowed large numbers of teachers like that to talk to each other, and to try out things which they themselves have discovered and leave their own evaluations, could be a very powerful national system of research based on the wisdom of practice.

Another point I would like to make is that we really need to do something about the whole issue of testing. We do have the national assessment, and that I agree has more credibility than anything else that is around now, but so many of the research projects, we find that something works or doesn't work on the basis of standardized tests. However, recent discoveries by Dr. Cannell and his organization, the Friends for Education, have found that everybody in this country is above average, and that the averages keep going up every year except in a few States that don't give copies of the tests to the people who are going to be giving them, so there is widespread cheating.

We also know that there are different sets of norms, so that a school system that wants to look good, the first year they compare themselves with affluent districts where the kids are doing pretty well in school, and the next year they use the same test but they compare themselves to a metropolitan district, and all of a sudden they look great. There is no requirement that any one report which set of norms they are using, so there are all sorts of games being played.

Therefore, a good deal of the research that is out there that is based on States or school districts reporting how well they do on standardized tests from one year to another or over a period is practically meaningless, given the kinds of games that are played by the test makers and school districts. We need to develop some sort of a standard that is going to be reliable over a period of time because these tests, really they are not measuring instruments. They are cosmetics more than anything else. People are buying something that will make them look good and that will cover up some of the problems within their districts.

Now I would like to make two additional points before I end my remarks. One of them is that one of the major problems with most of the research that we have is that essentially it is based on looking at what people do in schools, and since schools today are pretty much the way they were 50 years ago and 100 years ago, and indeed they are very much like what they were 200 years ago, what most of the research tells us is that if you try X, it doesn't work too well, and if you try Y, it doesn't work too well, and if you try A, it doesn't work too well, and if you try B, it doesn't work too well. That is, there are just mountains of research that have tried all types of things, that show that none of these things make too much of a difference.

Well, it seems to me that if you take the same way of doing things and keep looking at it, and can't find what will make a difference, one of the things that we ought to be doing is trying a different way of doing it. That is, we ought to be encouraging different ways of reaching kids.

I suspect—I don't have the research because there aren't many places out there one can look at—but I suspect that a lot of kids get turned off on school in second or third grade because they are not very good at sitting still and listening for 5 hours a day. Indeed, most adults aren't either.

We know that everybody learns at his own rate, but that is not the way a school is constructed. Everybody may learn at his own rate, but he better learn at the rate that I, the teacher, am speaking, because I am not going to have a chance to repeat it individually for each and every youngster. We humiliate youngsters by calling on them in second and third grade every day and asking them questions that they don't know the answer to. I suggest that one of the things we need to do is create some alternative models to see whether other approaches work better.

Finally, I would suggest that we need a different structure for our research operation, and I would suggest something that is perhaps independent of the Department of Education, something that is more like the National Science Foundation. You need something that is going to be depoliticized, something where research isn't conducted because one administration is in or another administration is in, like this class size "research"—in quotes—and I think you need an institution that is going to be able to conduct research in the long run and not abandon it.

You have to treat educational problems the same way you treat cancer research or research for the common cold. We have been looking for answers for a hell of a long time and we haven't found them. We are dealing with very tough problems. Answers are not going to be found in 1, 2, or 3 years, and we have to have the same patience and the same devotion and the same commitment to solving these problems as we do when we are dealing with diseases on which we have been working for a very long time.

Thank you very much.

[The prepared statement of Albert Shanker follows:]

STATEMENT OF ALBERT SHANKER
PRESIDENT, AMERICAN FEDERATION OF TEACHERS, AFL-CIO
TO THE
COMMITTEE ON EDUCATION AND LABOR
SUBCOMMITTEE ON SELECT EDUCATION
U.S. HOUSE OF REPRESENTATIVES
April 20, 1988

Mr. Chairman and members of the Subcommittee on Select Education:

My name is Albert Shanker, and I am president of the 665,000 members of the American Federation of Teachers. I greatly appreciate the opportunity to testify before this subcommittee on the vital issue of the federal role in sponsoring educational research and development.

Over the years, the AFT has appeared before Congress and in other forums both as a supporter and a critic of the federal role in education research. We have, however, consistently argued for much greater federal support of education research.

No other level of government has done and can as effectively do the job of collecting and publishing statistics and other longitudinal data, and stimulating and supporting basic and applied research, development, and dissemination on issues and problems of national concern in education. No other level of government has the resources, capacity, overview -- in fact, the obligation -- to concern itself with the national interest in education.

It is I hope incontrovertible that an educated citizenry is crucial to our national well-being -- not only from an economic perspective but from a political one: democracy, particularly in a diverse and pluralistic society, rests on a well-educated citizenry who are capable of participation in our government and our society, who are able to pursue and protect the blessings of liberty. If education, then, is critical for our national well-being, and if this nation is at risk because of the neglect and shortcomings of our education system, then it is vital to affirm and expand federal support for education research. From a strictly practical point of view, surely there is no other way to monitor, assess and make more effective this nation's investment in education. But currently we spend over $300 billion annually on education and only $80 million on education research. Is there any other enterprise, public or private, that spends so little on understanding the nature, needs, strengths and weaknesses of its own investments? With such a paltry sum devoted to research, is it any wonder that it took so long to "discover" that the nation was at risk?

The AFT has a number of criticisms of the federal role in education research. But first and foremost we believe that research is one of the best hopes we have of understanding the nature and process of learning and teaching and the policy and organizational structures that support or impede these activities. We believe that in an enterprise such as education, which is often fraught with conflicting values, opinions and politics, research is the best hope we have of distinguishing between fads and facts, prejudices and informed judgments, habits and insights. Without systematic inquiry, development, and testing, we will continue to have the same babble of arguments and practices concerning what works or ought to work. Without good research, we will continue on an endless cycle of mistakes and the loss of successful insights and discoveries. Without good research, there will continue to be an endless reinvention of mousetraps, the same rehashing of controversies, and, in the end, the same faltering school system. No enterprise has changed as little as education or has as endlessly reinvented past solutions and mistakes. And centrally implicated in this rut is the conduct of educational research. Research cannot and should not displace value and moral decisions; it will certainly not replace the political process in education. It can, however, help ensure that moral and political choices are informed and that our children's education is not the playpen of our idiosyncrasies.

Unfortunately, and far more than any other sector I am familiar with in which there is federal support of research, the federal role in education research has often been idiosyncratic; it has at the very least been unstable.

Take the question of whether or not the federal education research agenda reflects America's key educational priorities. The answer is, sometimes it does and sometimes it doesn't because that agenda changes with every Administration and, sometimes, even within the course of an Administration. This would not be a problem if our educational priorities and problems were equally mercurial. However, many of our educational problems, and most of our priorities, are enduring ones: providing equal access to knowledge, equal educational opportunities, to the nation's young, and ensuring a well-educated citizenry capable of participating in this nation's political, economic, and social life. Out of this enduring set of priorities, reasonable people can agree on an enduring research agenda, flexible enough to detect and attend to new problems but stable enough to ensure ongoing attention to core sets of issues. That is the case from agriculture to public health.

In education, however, every few years we have a new set of educational priorities -- usually announced by some catchy slogan -- and a new redirection of research funds. Years of research on public school finance may suddenly grind to a halt because suddenly private schools are in. Years of work on research and development in curriculum areas may be shelved because suddenly it seems inappropriate for the Federal Government to be involved in inquiry into curriculum content and curriculum development. Just as suddenly, after years of neglect of curriculum content, subject matter becomes hot again and there is a scramble to set up research centers to rebuild this field. And after years of neglect of basic education statistics, such as the supply of and demand for qualified teachers or the courses our students were taking or a uniform definition and reporting of the dropout rate, we are frantically designing data collection efforts to understand problems and issues whose consequences we are already living with. The renewed support for basic data gathering is very welcome, and we supported it. But the neglect of basic research in education, long a problem, is now virtually complete. One would be hard-pressed to find a thick portfolio of federally-sponsored research, built up over time, on how children learn and develop or on how schools are organized and how that may promote or impede learning -- and yet these are about as basic a set of questions as you can get.

This peripatetic and politicized dance of priorities in educational research is not exclusive to the present Administration of the Department of Education and OERI, though it may be more extreme. It has been a problem at least since the creation of NIE, the forerunner of OERI, and has persisted despite various reorganizations. A number of reasons are apparent for this condition. First, there has been little or no systematic solicitation of the advice of education groups and, particularly, practitioners about what issues, priorities and problems they see in schools and students, let alone their notions about what the research agenda should be. This omission is tantamount to a public health agency failing to keep in touch with medical practitioners (and vice versa) about the pattern of cases they are seeing. Although there has never been a good structure for field reporting, as it were, in the past few years the gulf between the main federal education research agency and practitioners has become enormous. One reason for this is the cutback of research dollars, which has prevented federal education research managers from going into the field, as they once did, and developing an agenda from the ground up. Another reason seems to be the special contempt and hostility of the present Administration toward public education, its constituency groups and practitioners. And another and longstanding reason is the artificial barriers that have been created and maintained between research and practice.

Another explanation for the unstable and frequently politicized education research agenda is that the money for research has been so modest and so much of it has been earmarked for labs and centers, that there's very little left to support other people, very few opportunities or incentives to stick to an issue (even in labs and centers), and even fewer opportunities or incentives for non-lab and -center researchers and new scholars to enter the field. I am not inherently opposed to labs and centers. I am more familiar with the work of the centers than the labs and have found much of their research enormously valuable. But the result -- again, not of the existence of labs and centers, but of the scarce overall research dollars -- is that research is concentrated in just a few institutions, among a relatively few people and their relatively few graduate students, and on a relatively fixed set of issues that may or may not be viewed as important at the next funding cycle or to the next Administration. It is very hard to focus attention on deep and difficult questions and to encourage the best minds to enter and persist with education research under this set of circumstances.

A third reason for this shifting nature of educational research priorities is that education research has been oversold and underchanged -- and in this instance I don't mean money. For whatever set of good or bad reasons, from the inception of NIE to the present moment of OERI the promises made and expectations raised about the power of education research to quickly improve practice and cure the ills of American education have been wildly inflated. No other field has promised as much (and received so little to pursue those promises). Every field instead says, "We have a set of difficult problems, and it will take a long time to solve them. We have some hunches, but there will be many false starts and blind alleys before we find a promising avenue. It will take the work of many researchers and practitioners, all learning from one another's mistakes and leads, and much testing -- a sustained effort. We do not ask that you leave us entirely alone -- after all, these are public funds. But much that we do will not seem immediately relevant or useful, and it will take a long time, if ever, before a 'magic bullet' is found, especially in a complex human endeavor. We will do our best." If the federal education research agencies have ever said anything like this to Congress, I would be surprised. I certainly know that when education researchers say this to their funding agencies, they are denigrated as ivory tower impracticals, pretentious excuse mongerers for their own irrelevant agendas. (I have my own frustrations with many education researchers, but this is not one of them.)

Not surprisingly, Congress has consistently held education research to a higher standard than it does research in any other field. And, equally unsurprising, it has always found it deficient. There is, after all, no "penicillin" in education, no manual of universal cures, no accounting of how many IQ points or SAT scores have been raised as a result of which piece of research. There has been no "quick fix" -- and the few that have been advertised that way by the government and imposed on schools have been very destructive. There has, however, been an impressive accumulation of relevant, useful and, sometimes, powerful research. And all too frequently, the pursuit, refinement, and testing of this research has been ground to a halt because of the intolerance for anything less than a magic bullet. In any other field, for example, conflicting results or ambiguity signals a new point of departure, a redoubling of efforts. In education, it frequently spells the end of support for a line of research, a budget cut -- or, at the very least, an occasion for ridicule.

The federal agencies that support medical research did not create the expectation that a cure for cancer or heart disease would be quickly found, despite the far more generous funds invested in these endeavors. Nor were researchers' feet held to the fire of immediate relevance, utility, and payoff by these funding agencies. Congress has certainly not punished these agencies for not yet succeeding in entirely solving these problems, and the minute and painstaking pieces of research sponsored by these agencies have not been held up to ridicule and branded as useless. A long-term view has not only been tolerated, it has been encouraged. A finding of "it depends," or "it only works for 25% of the population and under these circumstances" is regarded as a breakthrough. Isn't it time to apply this paradigm to education research?

Isn't it also time to encourage research and development on new paradigms of education? I am constantly struck by how the priorities of federal education agencies, and, therefore, the research they have sponsored, has taken the status quo of education -- its organization, structure, assumptions about learning and teaching and the like -- as givens, albeit to be improved, but givens. I know of no other fields save education whose structure, technology and basic ways of operating (and problems) have remained unchanged for over 150 years. There are many reasons for this, but a few stand out. One is the almost total absence of support for research by practitioners on what they practice. Another, and related reason, is the virtual halt in experimentation with and development of new paradigms and practices. I realize the difficulties of this in education, but other fields face the same ethical and other considerations in working with human subjects but nonetheless manage successfully. Certainly in education there seems to be no reluctance to impose untested "innovations" on teachers and students -- and often with disastrous results. There is therefore very little excuse for the failure to engage in development, demonstration, testing of new models in education, especially when participation is voluntary. Finally, and once again, the structure of the federal role in education research, at least as it has been discharged in its chief education research agency, NIE and now OERI, is such that it is exceedingly difficult to gain support for that which is not immediately "relevant" or seemingly useful or outside the realm of some short-term priority or traditional paradigm.

So what to do? The history of our federal education research effort as incarnated by NIE and OERI has been a short, troubled, and turbulent one. It has been marked by a surfeit of politics, short-term thinking, a declining budget and declining confidence, and much demoralization. There is tragedy in that, not only because the promise was so great but because so much good work has indeed been produced. Nor has there been a lack of dissemination, though sometimes poor work is disseminated while good work is withheld. Research has sometimes even found its way into practice, though here again I wish some of it had not and other findings had. And if much of practice has not been influenced by the best of research, the fault is neither the research nor the dissemination efforts of the researchers or of the sponsoring agencies; the reason is the fact that our school system is depressingly anti-intellectual and is not organized to consider, debate, and use research (save frequently of the worst sort that tends to get imposed top-down). The federal education research establishment did not create that situation, but neither has it done much to help understand or change it. Indeed, it has sometimes exhibited the same anti-intellectualism.

Given this short, tumultuous and under-funded history of NIE/OERI, and given my belief that the expectations and assumptions about education research that have been ingrained into Congress by NIE/OERI -- and which are part of the problem of the federal role in education research -- would be hard to change, I think that a new beginning may be warranted. I am not talking about yet another reorganization of NIE or OERI, for despite a number of reorganizations, the basic problems have persisted and some have been exacerbated (though good progress has been made in the statistics area under the capable and experienced leadership of one of education's finest civil servants). What I am instead proposing is a commission to study the persistent problems of the federal role in education research, and the reasons for them; the range of education-related research in other agencies, such as the Defense Department and the NSF, and what can be learned from how these enterprises are organized and work; the structure and conduct of other federal research agencies that are involved with large-scale issues, such as agriculture and public health; and what all of these tell us about how to organize the federal role in education research and the agency or agencies that discharge that responsibility, and how to ensure an adequate supply of top-flight people, including practitioners, working in a sustained way on enduring issues in education.

It may be that the current wheels will be reinvented, but I suspect not. For we have been bumping along now for quite some time, leveling the same charges and counter-charges, veering off in new directions sometimes even before there is a turn in the road and abandoning old directions sometimes just as the scenery gets greener. I strongly believe that the structure of our schools, and the assumptions and traditional paradigms that undergird it, is strongly implicated in the persistent problems our public education system, its students and teachers, face. I am far less expert on the structure of research or of the federal role in education research, but my strong hunch is that the way we have structured that role is implicated in the disappointments we have had, both warranted and not, in the conduct and results of education research.

END

Mr. OWENS. Thank you.
Ms. Chelimsky.

STATEMENT OF ELEANOR CHELIMSKY, DIRECTOR, PROGRAM EVALUATION AND METHODOLOGY DIVISION, GENERAL ACCOUNTING OFFICE

Ms. CHELIMSKY. Thank you. Good morning, Chairman Owens. Hello, Mr. Williams, Mr. Hayes. It is a pleasure to see you again. I am really happy to be here this morning to talk about our recent study, our GAO study of education information produced by the Department of Education.

Let me introduce two people who are here with me today, Dr. Lois-ellin Datta and Dr. David Cordray, who worked on the study. I am just going to quickly summarize. I know you have the statement and I would ask that it be made a part of the record.

As I was listening to the panel just before this, I really had the feeling that our paper is kind of baseline data for everything that everybody said. You know, you can't imagine a clearer illustration of the "limping" research— the quote from Representative Flood.

Also I should tell you this is a very unusual situation for the GAO. The Department, the Department of Education, agrees with our findings—this is a very extraordinary thing for us—and has said publicly, "The GAO has it just about right." I don't remember that having happened with a department in a long time. What is really good about it is, it means we can dispense with some sparring and get down to brass tacks.

What new knowledge, then, did our study produce about education information? I have five findings that I want to report to you.

First, the production of education information declined enormously between 1980 and 1985. By information I mean research, evaluation, statistical surveys. Grants and contracts decreased by 65 percent for research, by 79 percent for evaluation over the 6-year period. Statistical surveys fell by 31 percent, but only over a 4-year period, so it is probably more if you take it in a larger period. The amount of information the Congress and the public are getting about the national education enterprise, then, has been diminishing rapidly.

Second, the kind of information being produced has changed. Between 1980 and 1985 the percent of awards made for new data collection declined from 65 percent to 11 percent, while activities like dissemination of information already produced moved up to 89 percent of all awards. I am a great believer in dissemination, but 89 percent? That is really quite a lot.

Third, the locus of information production has changed. In 1980 institutions received only 25 percent of research awards, whereas in 1985 they got 56 percent, more than double, so the diversity of sources for information production has shrunk.

Fourth, we looked carefully at the quality of statistical programs. After all, if the data are technically flawed or are irrelevant to policy concerns, it hardly matters how much you get. What we found was mixed. The National Assessment of Educational Progress rated high. As everyone says, that always turns out looking very credible, no matter what kind of a look you give it. The

Fast Response Survey System rated medium on technical quality but high on relevance; the common core of data was poor technically. An aggravating factor here was that the problems we found had been going on for decades.

Finally, we think the major influences on the decline of educational information have been these: severe reductions in funding levels since the early seventies, down more than 70 percent despite an increase of 38 percent in the Federal investment in education as a whole over the same period, so a precipitous decrease in funds. Another influence has been continual changes in leadership and priorities in the Federal education establishment, yet information needs to be built carefully and cumulatively over the years, with steady direction based on what we need to know about education and what is possible to find out rather than what will look good. Finally, we found some evidence of technical practices that really need to be improved.

What do we conclude from our work? Four things: First, since everyone agrees that sound information about education is important for making sound education policy, we think the precipitous trend in declining information production must be reversed.

Second, when funding is scarce there is always a temptation to favor information that is easy to produce, like new dissemination of old products, versus information that is hard to produce, like new research and evaluation. Yet to give a low priority to new knowledge is a dangerous strategy for an information function and one that will be costly over the long term. I am not saying not to do dissemination; I am saying the balance needs to be maintained. We would like to see broad-based oversight that takes into account the diversity of information needs of many users.

A third conclusion is the importance of a carefully prioritized research agenda. We don't believe that great breakthroughs in research are likely to result from a strategy of dispensing a very little bit of money evenly across a very large number of researchers.

Finally, we think that just providing more funds will not solve the problems we found. More money is needed, but so is stability, leadership, rigorous technical oversight, and courageous prioritization.

Mr. Chairman, that concludes my remarks. I would be happy to answer any questions later.

[The prepared statement of Eleanor Chelimsky follows:]

United States General Accounting Office

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Production and Quality of Education Information

Statement of
Eleanor Chelimsky, Director
Program Evaluation and
Methodology Division

Before the
Subcommittee on Select Education
Committee on Education and Labor
House of Representatives

GAO/T-PEMD-88-4

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

It is a pleasure to be here today to report to you on our study of the condition of information on education in the United States. The results I present here come from our report entitled Education Information: Changes in Funds and Priorities Have Affected Production and Quality (GAO/PEMD-88-4). Today, I would like to highlight our central findings and discuss their implications. Our work covered selected years between 1973 and 1986.

I want, in particular, to make three points. The first is that in my opinion, sound information about education is important--even vital--to educational reform and to oversight. The second point is that we have found reason for concern about the production of education data--that is, whether this sound information will be available. The third point is that the reasons for the problems we found are complex. They include lack of resources, but that is not the whole story. Thus, turning the situation around is likely to take time and to require in itself considerable information and monitoring.

The Importance of Information About Education

As you know, although education in this country is a responsibility of the states, the federal government spent nearly $20 billion in fiscal year 1987 to support all levels of education. In 1867, the Congress authorized the creation of a noncabinet Department of Education to obtain information on the condition of education for purposes of identifying emerging needs, determining how well programs are working, and promoting educational improvement, an authorization continued and expanded over the years.[1] I think that today, no less than in 1867, it is critical to have high-quality information for overseeing federal educational resources, assessing the progress the nation has made in improving educational access and quality, and identifying shortfalls yet to be dealt with successfully. By high-quality information, I mean information that is relevant, timely, technically adequate, and usable for policy decisions.

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[1] Although the Department of Education was not made a cabinet department until 1979, we refer to it as the Department of Education.

Reason for Concern: The Production of Information

Federally sponsored research and statistical and evaluative information on education declined dramatically during the past decade. With regard to research, the number of grants and contracts awarded decreased from 476 in 1980 to 168 in 1985. The change from 1980 to 1985 was the most dramatic for the unsolicited proposal program in the National Institute of Education (NIE) because it was cut completely.

Declines in awards for evaluations were also substantial. The high level of activity that began late in the 1970's (80 or more awards annually) peaked at 119 in 1980 and began to drop in 1981, leveling off to between 25 and 28 activities annually. From 1980 to 1985, the decline was 79 percent. The biggest overall decrease followed the passage of block grant legislation, which affected many of the elementary and secondary education programs that had previously received the bulk of the evaluation support and review.

The total number of statistical surveys, planned or conducted by the National Center for Educational Statistics (NCES), now named the Center for Education Statistics (CES), grew by 49 percent (from 37 to 55) between 1974 and 1980.[2] However, between 1980 and 1983, the number of surveys fell by 31 percent, returning to its 1974 aggregate level. In addition, the intervals between statistical data collections increased, and technical support to states for data collection was sharply reduced. For example, over the 9 years we examined, there was a 20-percent decline in annual surveys (which permit detailed analyses of trends) and an 83-percent increase in occasional or one-time surveys.

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[2] In the department's October 1985 reorganization, NIE and NCES were discontinued as separate agencies and all their functions and activities were assigned to the five operating units of the Office of Educational Research and Improvement. (The five units are Office of Research, Center for Education Statistics, Programs for

Concern over the quantity of awards is heightened by three other significant changes.

Shift Away From New Data Collection

First, not only was less information produced: we also found changes in priorities. For the National Institute of Education's portfolio of activities, there was a shift away from new data production to service-oriented activities, such as dissemination of results and the provision of expert witnesses in civil rights cases. Sixty-five percent of NIE's 1980 awards were for new data collection, but only 11 percent of the 1985 awards were dedicated to this function. In our view, this shift was so dramatic that the

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the Improvement of Practice, Information Services, and Library Programs.) CES performs most of the former responsibilities of NCES. And although some NIE responsibilities have been transferred to the new units, the Office of Research now carries out the activities of NIE that we discuss in this statement. Because our review covers the period prior to the departmental reorganization, we refer to each unit by the name applicable during that period--that is, NIE, NCES, and the Office of Planning, Budget, and Evaluation (OPBE).

availability of up-to-date information to disseminate to teachers and other practitioners may be seriously jeopardized.

Fewer Areas Investigated

Second, fewer educational areas were investigated in 1985 than in 1980 through research grants. In 1980, for example, 56 of 293 awards for new data collection went toward studies of special populations, such as minorities and women. In 1985, there were five such studies. Some areas such as learning in nonschool settings and areas identified as "school problems" (including such issues as dropouts and delinquency) received no new data collection funds in 1985; in 1980, there were 33 awards. Even for the topics that have frequently been identified as important areas for educational improvement--for example, improving teacher preparation; strengthening curricula in mathematics, science, and English; more-effective instruction; classroom management and school leadership--there were few awards for new data collection in 1985.

Information Producers Changed

Third, there was a shift among those who carried out the work of producing information, and the procurement process became more constrained. The proportion of research awards made to department-sponsored institutions (for example, laboratories and budgetary declines in two ways. The number of target populations was reduced from five principal groups (9-, 13-, and 17-year-olds in and out of school and adults) to three (9-, 13-, and 17-year-olds who remain in school), and the assessment cycle was altered from annual to biennial, or longer, some content areas only being assessed at 4- and 6-year intervals. This is important because the ability of NAEP to record changes in performance depends on maintaining short intervals between assessments. As an interval increases, the ability to signal changes becomes more limited. Further, many groups, including students younger than 9 years old, are not assessed by NAEP.

The Common Core of Data--a primary source of nationwide information on elementary and secondary institutions--was not rated high on any of the four indicators, although some data elements were found to be adequate. In general, data were not comparable across states, mainly because data elements were reported at different levels of aggregation or were derived from different definitions and data collection procedures. Problems with CCD have long been recognized, but few have been solved. Commendably, the department is currently making efforts to improve some parts of the CCD.

The Fast Response Survey System was rated moderate to high on quality, especially given the low budgets associated with each survey. The system has been responsive to the information needs of national centers) increased substantially from 1980 to 1985. In 1980, those institutions received 25 percent of the awards in three major program areas, compared to 56 percent in 1985. The cumulative result of various shifts in awards is that the majority of the department's information producers were institutions or contractors. This shift is a concern because, while contracts may be the most applicable when there is a specific request for information (for example, a congressionally mandated study) or when continuity in data gathering is necessary (for example, in a statistical series), their use as the predominant vehicle for funding research may be inappropriate. Compared to the grants mechanism, for example, a contract is likely to constrain rather than broaden inquiry.

Reason for Concern: The Quality of Information

Turning to our concern for the soundness or quality of information, we reviewed in-depth evidence regarding four dimensions of quality--relevance, timeliness, technical adequacy, and impact--for three statistical series--the National Assessment of Educational Progress (NAEP), the Common Core of Data (CCD) for elementary and secondary education, and the Fast Response Survey System.

In general, NAEP ranked high on all four dimensions, but it has suffered some decline in relevance and timeliness in adapting to fiscal constraints. In particular, it has been affected by the requesters and has minimized time delays by releasing findings early. Reporting survey procedures could be improved, however. Methods for handling nonresponse and overall response rates were not always reported in sufficient detail to assess the quality of practice.

Complex Influences on Production and Quality

The overall picture, then, is one of many reasons for concern and also of some successes with regard to educational information. In examining the reasons for these problems and successes, we found that resources play a major role but that lack of money was not the only issue.

The fiscal resources for the department increased in current dollars from approximately $6.1 billion in 1973 to $19.5 billion in 1986--an increase of 220 percent, or 38 percent in 1972 dollars. The trends for fiscal support of the production of research and statistical and evaluative information were quite different. Since the mid-1970's, NIE experienced a 79-percent reduction in constant 1972 dollars; NCES experienced a 65-percent reduction; and the Office of Planning, Budget, and Evaluation's resources declined by 64 percent. These reductions are in sharp contrast to the 38-percent increase in the federal investment in education over this same period.

Viewed another way, changes in fiscal resources for education information were more severe than was reported for other federal agencies with similar missions. That is, while the real purchasing power of overall federal research funds grew by 3.7 percent between 1980 and 1984, NIE's funding level declined by 48 percent.

NCES also suffered greater losses in funding than other statistical agencies. While the investment in statistical activity, in general, declined by 18 percent between 1980 and 1984, NCES experienced a 28-percent reduction.

Evaluation also was hard-hit. Funds spent on evaluation contracts declined by 63 percent; in general, resources for evaluation in nondefense federal departments and agencies dropped by 37 percent. Although all three types of information showed larger reductions than similar agencies, the greatest discrepancy was for the research function, followed by evaluation activities.

For research and statistical and evaluative information, the patterns of declines in funding were consistent and precipitous. They paralleled the reductions in awards discussed above. Further, the consistency of decline in resources across these three types of information suggests across-the-board reductions in information rather than a substitution of statistics for either research or evaluation.

The Role of Mandates

The decline in funds interacted with two other factors. First, although all information-gathering activities were affected by budget constraints, congressionally mandated activities received smaller reductions and thereby consumed an increasing share of available resources. About 79 percent of NIE's resources for research in 1984 went to legislatively required activities such as the Educational Resources Information Center (ERIC) and the laboratories and centers, in contrast to 55 percent in 1980.

This shift is important for three reasons. First, while mandates can protect an activity by ensuring a sustained level of support, other activities may be affected by insufficient funding or staffing or both. Information-gathering activities that did not carry a mandate were more vulnerable when faced with fiscal constraints.

Second, specially mandated studies have a large but transient effect on the operations of information-producing agencies. Depending on a study's size or timing, it can consume a substantial amount of a unit's resources, incurring opportunity costs with regard to other activities. The problem is exacerbated when the units experience losses in staff, as we observed.

Third, with regard to quality, mandates alone are not sufficient to ensure that high-quality information will be available when it is needed. For example, the National Vocational Education Data System was mandated in 1976, and after several years it was disapproved by the Office of Management and Budget on the grounds of severe technical problems. Here the system was mandated with little consultation with the department, no resources were specially appropriated, and the time for reporting information back to the Congress proved to be unrealistic.

Changes in Leadership and Priorities

Changes in agency leadership and priorities also powerfully affected the production and quality of information. Each of the information units changed in top management positions during the 1980's. For example, NIE had a total of seven different directors from 1980 to 1986, three of the seven serving as acting director. At least 16 persons served in the five other top management positions, one of which was created in 1984. In six cases, individuals served on an acting basis or as special assistants. NCES and OPBE showed similar patterns.

The consequences of management changes can be found in the operation and priorities of the information-producing units. For example, one identified priority for research at NIE in 1978 was the study of complex learning skills. Many studies have shown that gaps among students are greatest in these skills and that this is an area where our school system may be falling short. Despite a 3-year effort to develop research proposals in this area--an effort that resulted in 30 proposals being recommended for funding by panels of experts--no awards were made. A change in directors had meant that this was no longer seen as a priority area. In sum, the cycle for research funding (from identification of a priority through the award process to the reporting of results) may take many years, but the tenure of the director is typically less than a year. This is long enough to stop what had been started but not long enough to see initiatives through to completion.

Turning the Situation Around Is Likely to Take Time and Require Data and Monitoring

The situation we have sketched here is complex, and some of the problems--particularly with the statistical information systems--are long-standing. I believe it will be neither quick nor easy to turn the situation around, involving as it does funds, how priorities are set between mandates and discretionary studies, leadership and staffing, and other factors.

This view is not shared by the department. In particular, citing the many organizational changes initiated since 1985, the department believes that our analyses do not reflect the current situation. In fact, its response states that "the department has taken clear and decisive action to address most of the problems cited in the report" (emphasis added). In support of this claim, the department enumerated how the information portfolio had been augmented and the topical areas broadened.

In my view, it is too early to determine whether the organizational and procedural changes that have been initiated will adequately address the problems we identified in our report--or new ones that the changes might create. For example, we know that the department has funded many new centers and minicenters that may be collecting new data; however, detailed information was not available for us to determine how many awards were directed at remedying the educational disadvantages of various populations, for example. While it is useful to have additional information on the department's recent efforts, assessing whether the information that is to be produced by these activities will be available and high enough in quality requires more fine-grained evidence.

For example, the findings of our report could serve as a partial baseline against which to assess the effects of departmental initiatives to improve the technical adequacy, relevance, and timeliness of the particular statistical activities covered by our review. More generally, the framework for quality we applied could be used as a basis for systematically examining other statistical programs. In reviewing the department's comments on our report, however, we found no mention of any plans to assess progress empirically. Making plans for a formal evaluation of recent changes would be a most timely and useful endeavor.

For other nonstatistical information-gathering activities, a fundamental part of any assessment of progress is the specification of the appropriate indicators of success. In the case of research, it seems to me that more is needed than a simple list of activities. As our review shows, several types of evidence are needed to determine whether appropriate information is being produced. Phrased as questions, they are, What educational areas are being investigated? What target groups is information being gathered on? Who is responsible for developing the research agenda? What type of procurement process is employed? What fraction of the awards is devoted to new data collection versus support services? Will the new data that are to be produced be sufficient to address important questions raised by the large range of stakeholders in the educational community? Comprehensive descriptive information will provide the needed basis for discussing the implications of various decisions that are made. Where information gaps are uncovered, reprioritization or augmentation could be initiated. Of course, ensuring the technical quality of the research that is funded must remain a high priority as well.

Summary

In summary, we have found serious problems affecting the production of high-quality information on the condition of education. As I said earlier, there is no simple solution to these problems. Insufficient funding is directly associated with some of the declines in information production. But it is unlikely that merely providing more money will allow the department to recover from the losses engendered by the reductions in awards. Further, mandating particular studies will not work unless resources (staff, time, and money) are available. Technical oversight is probably needed to ensure that high-quality information is produced. Finally, broad-based oversight--that takes into account the diversity of information needs of many potential users--concerning priorities on what is to be collected, on whom, and under what type of funding mechanism seems necessary to avoid many of the notable losses in information that we observed.

Mr. Chairman, this concludes my statement. I will be happy to answer any questions the subcommittee may have.

Mr. **Owens**. Thank you.
Mr. Purves.

STATEMENT OF ALAN C. PURVES, DIRECTOR OF THE CENTER FOR WRITING AND LITERACY, STATE UNIVERSITY OF NEW YORK

Mr. **Purves**. Thank you very much, Mr. Owens, Mr. Williams, Mr. Hayes. In addition to my prepared testimony, I have been asked as chairman of the International Association for the Evaluation of Educational Achievement [IEA], which is a cooperative association of national research institutions, to comment on possible explanations for the relatively poor performance of United States students in the recent IEA mathematics and science studies which were described by Dr. Coleman in the previous panel.

It would also appear from these results that the relative position in both subjects of the U.S. students has slipped over the past two decades, but such is not necessarily the case, since there have been shifts both in the countries participating and in the precise definitions of the groups of students tested. As my written testimony states, any comments that I make at this point must be tentative. They are suggestions as to where to look in the vast array of data and in follow-up inquiries for various kinds of classroom observation and other sorts of research that should be undertaken following surveys of this sort. I would propose five areas in which to explore the data.

It may be that U.S. students simply spend less time studying mathematics and science. This is not simply a matter of the length of the school day or the school year, but the difference between one course in biology in one year, followed by a course in chemistry and a course in physics, as opposed to parallel courses in the three subjects taught over three or four years. We have gone for a layer cake approach, and other people have criticized us for it.

It may be that the tracking practices in the United States diminish the amount of engaged time in studying school subjects for a large number of students, and this affects primarily the poor and the disadvantaged and minorities. They appear to spend a lot of time in review and "busy work" rather than in learning new concepts and information. It may be that U.S. students, particularly at the preuniversity level, have simply had less schooling than their counterparts in other systems of education.

It may be that the way science and mathematics are taught in the United States is both less effective and has lower expectations concerning student performance than is the case in other systems. The IEA study, like the NAEP study, very often provides facts but it cannot, neither study can say what the level of expectations might be, and these are up to the public at large.

It may be, as others have suggested, that the social fabric in the homes and the schools of the United States is less supportive of academic performance than it is in other systems of education.

These are but five possible areas where analysis of the IEA data might be revealing and might point to policy solutions to the problem of low comparative achievement, but we cannot move beyond conjecture without exploring the data, and no one can explore the data without adequate support. I might add that the U.S. report on the IEA study of written composition, which seems to be coming up with somewhat similar results but perhaps different ones, that the U.S. report is not being written because there has been no support to undertake the necessary analysis of the data.

I would like to reiterate two of the five points of my testimony which you already have. The first is that studies like the IEA studies provide detailed survey data on student performance in various academic subjects against a broad spectrum of information concerning the students, teachers, and schools. They seek to provide good, benchmark data without necessarily the kind of poor norms that Mr. Shanker was talking about. They seek to enable researchers to undertake subtle comparisons of educational practice and performance across national boundaries. Internationally, the propose to carry out a series of cyclical studies into the next two decades, into the 20th century, looking in a 3- or 4-year cycle at literacy, mathematics, science, and other aspects of cultural learning.

Currently, the funding for studies like this—of which IEA is an example—in the United States is haphazard. In other countries, such studies form part of the educational budget and planning, up to 10 percent in Sweden. A single study costs approximately $2 million for national costs and another $2 million for international costs over the 6-year life of the study. This means a budget outlay of approximately $350,000 per year for a country and approximately $50,000 per year as a contribution to the international costs. There is no other international funding, save national contribution.

Such is hardly a major item on a budget. These funds are now in the budgets of several OECD member-countries. Yet the raising of funds to support U.S. participation has been a serious problem for each of the studies over the past 25 years, and it seems cloudy for the future, despite the good will of people in the various Federal agencies, and there has been a great deal of good will but a lack of funds.

There have been a number of reasons for the problem, among them issues such as sole source projects, the difficulty for some in realizing they have to cooperate in a design rather than dictate it, changing personnel in the agencies and, most important, the lack of a permanent budget line for international studies. None of these is insuperable, and I believe that the approach of developing an organization—either governmental or a quango—to oversee the administration and collection of educational research and assessment data might go a long way toward solving both the problem of continuous funding and the problem of underutilization of research data within the United States.

Organizations in England, Japan, the Netherlands, Australia, and Italy, to name a few, have successfully surmounted these problems and have been steady participants in and supporters of organizations like IEA that have had long-term goals and objectives. They have also cooperated well with national assessment. Whatever the mechanism, I believe that this committee can help steer a course to a regularization of U.S. participation in international educational research and assessment. Thank you very much for the privilege of testifying this morning.

[The prepared testimony of Alan C. Purves follows:]

TESTIMONY OF ALAN C. PURVES, CHAIRMAN,

INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT (IEA)

BEFORE THE HOUSE SUBCOMMITTEE ON SELECT EDUCATION, APRIL 20, 1988

SUMMARY

- THE IEA STUDIES PROVIDE DETAILED SURVEY DATA ON STUDENT PERFORMANCE IN VARIOUS ACADEMIC SUBJECTS AGAINST A BROAD SPECTRUM OF INFORMATION CONCERNING THE STUDENTS, THEIR TEACHERS, AND THEIR SCHOOLS.

- THE IEA STUDIES ENABLE RESEARCHERS TO MAKE SUBTLE COMPARISONS OF EDUCATIONAL PRACTICE AND PERFORMANCE ACROSS NATIONAL BOUNDARIES.

- THE IEA STUDY RESULTS HAVE SHOWN THAT THE MAJOR FORCE BEHIND STUDENT PERFORMANCE APPEARS TO BE THE CURRICULUM AND THE OPPORTUNITY IT PROVIDES FOR STUDENT LEARNING.

- THE IEA STUDY DATA HAVE BEEN AND CONTINUE TO BE UNDER-ANALYZED AND SO POSSIBLE SOLUTIONS ELUDE THE RESEARCH AND DEVELOPMENT COMMUNITY.

- IN THE PAST FIFTEEN YEARS THE UNITED STATES GOVERNMENT HAS CUT BACK DRASTICALLY ON ITS SUPPORT OF THESE STUDIES AND HAS NOT MADE A LONG-TERM COMMITMENT TO FUND ITS NATIONAL AND INTERNATIONAL PARTICIPATION IN THEM.

Background

Clearly one of the best indices of the effectiveness of an educational system is the performance of the students who go through that system. Although many educators have bemoaned the metaphor of input-process-output as applied to schools, one finds it hard to deny that one major function of schools around the world is to change the students by insuring that they be more informed and more skillful in matters concerning the intellect, the physical body, and the soul. There have been many ways of considering this aspect of school effectiveness. One of the most frequently used around the world is by counting the number of percentage of those who complete schooling. Such a statistic is often seen as a surrogate for literacy, for example, as if the performance of a student can be equated with the level of schooling attained. This indicator, school or grade completion rate, however, has recently been criticized as masking the fact that in many systems of education completion can have little to do with learning so that school graduates cannot read or do simple mathematics.

The demand on the part of educational systems to have better indicators of the success of the system lies behind the work of the International Association for the Evaluation of Educational Achievement (IEA). In general these assessments have differed from previous tests including the various standardized achievement tests in their function and their form. Their function is not to differentiate among students as individuals nor is it to measure something called intelligence, aptitude, or ability. The function is to measure the effectiveness of a school or school system and thereby to deal with the sorts of content that schools purport to be about. The consequent form, therefore, is to measure as fully as possible the various domains of learning from cookery to nuclear physics, from sports to the writing poetry. These domains must be clearly related to the curriculum of the school system, what it is that the schools intend for students to learn.

These projects have been research studies that have produced various educational indicators. The IEA Studies in particular have pointed to the relative performance of comparable groups of students in various countries. The results of these studies have caused concern among policy makers at various levels of govenment throughout the world. The most recent round of studies, that in Science, for example, has caused concern in Italy, Sweden, and the United States and forms one of the reasons for my being asked to testify at this hearing. I shall first say something of the way in which IEA has operated and something of its major findings, and I shall then address the research needs that follow from these sorts of studies. I have appended a brief description of IEA and a paper on the future activities of the association.

The IEA Research Strategy

Over the years of its history, IEA has developed tests to compare national performance on the following subjects: mathematics, reading comprehension, science, literature, English as a foreign language, French as a foreign language, civic education, and written composition. It is currently in the process of developing measures of computer knowledge, and of reading literacy, and is contemplating a measure of social values and moral education. There is an unparalleled wealth of experience in curricular analysis, test construction, and scoring among the various people who have developed IEA measures. These measures have included cognitive mutliple-choice measures, attitude scales and inventories, preferential scales, direct measures of writing, speaking, and practical laboratory work in science, and observational schemes for classrooms and group work. The tests are supplemented by extensive questionnaires to teachers, students and school leaders. The result is one of the richest data sources on student achievement and its correlates presently available to educational researchers and policy makers.

The purpose of this activity is to provide a source of data for research and dvelopment and for decision makers at all levels. That source has been under-utilized, particularly in the United States where the data have not been fully analyzed in order to probe into the possible reasons for the shortcomings of American students and schools. The number of follow-up analyses has been few and the data banks have not been made readily available to researchers and decision-makers at various levels. They exist, but they have not been well used, in part because of their complexity but in great measure because their existence has not been well spread through the existing research dissemination networks. The following provides an example of how such further analyses might be performed.

An Example of How the IEA Data Might be Used

The major concern of those working on the IEA measures over the past twenty-five years has been that of validity. Since IEA is concerned with comparing the performance of comparable groups of students in different countries, speaking different languages, and inhabiting differing cultures, a main issue of its test-constructors has been the development of neutral yet meaningful measures. As some have said, the tests "strive to be equally unfair to everyone." The tests have also been paired with measures that seek to describe the differences among systems of education as well as their commonalities. This is why there have been a variety of measures of attitude and preference and why there have been content analyses of student performance as well as measures that can be summed up on a single scale. The aim has been to develop indicators of student learning that accurately reflect the relative performance of groups of students on common measures yet show the differences between curricula and school systems.

One of the major ways by which this dual feat is accomplished is through an index known to IEA as "opportunity to learn." As far as I know it is a feature unique to IEA measures, and one that has been consistently used since the first mathematics study in the early 1960's. This index is based on an indication by the teachers of the students tested as to whether the material or process or concept measured by a specific item has been presented to the student and how recently it has been presented. The various IEA studies have experimented with different ways of determining Opportunity to Learn. In some cases it has been by a single question; in some by a set of questions that seek to disentangle curricular history; and in some by a series of detailed questions on methods of teaching. There have also been interviews of teachers after the testing as well as interviews and questionnaires given the students themselves. In two studies the same measures have been given to both student and teacher with a request to estimate the order of importance of various items.

Whatever the method, the result has been to show that at the operational level of schooling there is variation between and within systems of education as to the opportunity students have had to master a particular concept, learn a particular procedure, or adopt a particular cognitive style, each of which is seen as an important aspect of schooling. The Opportunity to Learn indices have often explained differences in student performance that might at times appear to make one system's student appear better taught than another's. In mathematics and science, different sub-topics are covered, in reading, literature, and writing different genres and different strategies are stressed. In foreign languages different emphases are placed on the skills of reading writing, speaking, and listening. In civic education different relationships are set among the various civic and familial values. The Opportunity to Learn analyses in some countries including the United States have shown that the more complex aspects of reading comprehension--inference and critical reading--are not taught to many students. They can be successfully taught, however, as the performance and opportunity to learn ratings in other countries show. The same appears to be true in science, written composition, and mathematics. These sorts of analyses must be further pursued.

Summary, Conclusion and Recommendations

Other sorts of analysis of the data might explore the effects of tracking on student performance, the relationship between home support and school performance, the effect of specific teaching practices, and the relationship between achievement and other attitudes and interests of the students. The data to raise specific hypotheses for further experimentation and investigation reside within the IEA data sets. The fact that there are parallel data from other countries enables researchers to see the extent to which a certain relationship is general or specific to one country or educational system. The IEA data sets provide a rich source for researchers. Currently they are not being well used. The National Academy of Education has recently completed an analysis of the problem and has made recommendations concerning permanent funding of the IEA data banks in order to make them readily available and accessible.

IEA has developed great expertise in the assessment of student performance against a background of home, school, teacher and student variables. It has created measures that are used both nationally and locally as well as internationally. IEA has developed expertise in sampling of school populations, in the preparation of data files, and in the use of various statistical techniques in the analysis of large data sets. In particular it has developed great expertise in the analysis and interpretation of results in the light of the culture of a system of education and its specific goals and objectives. This expertise is apparent to a varying extent across the studies: in the curriculum analyses, the test and questionnaire items, the methods of scoring, and the analysis and interpretation of results. All of these kinds of expertise are of use to all sorts of systems of education no matter what its educational goal or educational concern. Most systems of education in the world need to have some way of looking at the results of their efforts and expenditures. IEA is probably in a better position than any other international organization to meet that need.

To this end, IEA has agreed in principle to establish a recurrent cycle of assessments, so as to provide a decennial census of educational performance in at least three curriculum areas: mother tongue or language of instruction (including reading and writing), mathmatics, and science. There is also some call for the inclusion of both foreign language and cultural studies (history and geography). The representatives from England and Sweden are collaborating on an operational plan for such a census. This project should, I think, complement various national assessment projects (although they cannot replace the national assessments which have other uses and purposes) and should, I hope, be included in the budget planning cycles of the appropriate ministeries. International comparisons of student performance are important for policy makers at all levels, from the classroom to the cabinet. They are an invaluable resource for the educational research community. They are expensive if they are to be done well, but IEA is developing a means of making the international costs bearable.

Currently the funding for the IEA studies in the United States is haphazard. In other countries the studies form part of the educational budget and planning. A single study costs approximately $2 million for national costs and another $2 million for international costs over the six-year life of the study. This means a budget outlay of approximately $350,000 per year for national costs and $50,000 per year as a contribution to international costs. Such is hardly a major item. Yet the raising of funds to support United States participation has been a serious problem for each of the studies, despite the goodwill of people in the various federal agencies. There have been a number of reasons for the problem among them the issue of sole-source projects, the difficulty for some in realizing they have to cooperate in the design rather than dictate it, changing personnel in the various agencies, and the lack of a permanent budget line for international studies. None of these is an insuperable problem, and I believe that the approach of developing a quasi-autononmous non-governmental organization to oversee the administration and collection of educational research and assessment data might go a long way towards solving both the problem of continuous funding and the problem of under-utilization of research data within the United States. Certainly organizations like that in England, Japan, Australia, and Italy, to name but a few have successfully surmounted these problems and been steady participants in and supporters of organizations like IEA that have long-term goals and objectives.

Whatever the result, I also believe that this Committee can help steer a course to a regularization of United States participation in international educational research and assessment. Thank you very much for the privilege of testifying this morning.

Alan C. Purves
Chairman
International Associaition for the Evaluation of Educational Achievement

In addition to my prepared testimony, I have been asked, as Chairman of the International Association for the Evaluation of Educational Achievement (IEA) to comment on possible explanations for the relatively poor performance of United States students in the recent IEA mathematics and science studies. It would also appear from the results that the relative position in both subjects has slipped over the past two decades, but such is not necessarily the case since there are shifts both in the countries participating and in the populations tested in various countries, thus making temporal comparisons dificult. As my written testimony states, any comments must be tenative; they are suggestions as to where to look in the vast array of data and in follow-up inquiries. I would propose five hypotheses to explore:

1. It may be that United States Students spend less time studying mathmatics and science. It is not a matter of the length of the school year or the school day but the difference between one course in biology in one year followed by a course in chemistry and one in physics as opposed to parallel course in the three subjects taught over three or four years.

2. It may be that the tracking practices in the United States diminish the amount of engaged time in studying school subjects for a large number of students. They appear to spend a large amount of time in review and busy work rather than learning new concepts and information.

3. It may be that United States students at the pre-university level have simply had less schooling than their counterparts in other systems of education.

4. It may be that the way science and mathematics are taught in the United States is both less effective and has lower expectations concerning student performance than is the case in other systems.

5. It may be that the social fabric in the homes and schools of the United States is less supportive of academic performance than it is in other systems.

These are but five possible areas where analysis of the IEA data might be revealing and might point to policy solutions to the problem of low achievement. But we cannot move beyond conjecture without exploring the data and we cannot explore the data without adequate support. I might add that the United States report on the IEA study of written composition is not being written because there has been no support to undertake the necessary analysis. Let me reiterate my five main points.

- THE IEA STUDIES PROVIDE DETAILED SURVEY DATA ON STUDENT PERFORMANCE IN VARIOUS ACADEMIC SUBJECTS AGAINST A BROAD SPECTRUM OF INFORMATION CONCERNING THE STUDENTS, THEIR TEACHERS, AND THEIR SCHOOLS.

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Thank you again for the privlege of appearing before this committee.

Mr. **Owens**. Thank you. I want to thank all of the panelists.

Just in case Mr. Hayes has a time problem, I would like to let him lead the questions.

Mr. **Hayes**. Thank you, Mr. Chairman.

I have one very basic question that troubles me, and I guess it is somewhat similar to the situation I ran into when I was sitting down with a group of trade unionists in South Africa. I thought I was in my own back yard and they would be receptive to some of the inquiries that we were to make, and I told them that we were on a factfinding mission by being there. One young trade unionist sat up and said, very quickly, "We don't need any more seekers of facts over here. The facts are well known as to our situation."

I raise that only to indicate some parallel between research and what it can accomplish. I think that it is good that this committee is going into it, but there are certain things wrong with our educational system that we don't need research to reveal.

The fundamental question that I raise, and I raise it to the whole panel, do you really feel or have you concluded, as I have, that we don't have the concern for offering the same educational opportunities to the economically disadvantaged in this country than we do to the more affluent, because the direction we seem to be going would indicate that we don't have that kind of feeling.

There seems to be a readiness to write off—and I say this because I represent a district that a kid who is on public assistance, after the third week of the month has to go to school hungry, and it is hard to learn in that kind of atmosphere, yet we are constantly under threat of discontinuing the kind of Federal assistance that provides these kinds of programs. When I go into, for example, a high school in my district which is predominantly black, you don't have computers that are necessary in order to fit into this society or learn. On the other hand, you can go into some of the suburban high schools, or go into a military school and visit my little niece on the base, and they have computers even at the sixth grade level, so it causes me to conclude that I don't think we are really concerned about educating many of our kids.

The second question—I will throw it all out there, and I think this is more directed to you, Mr. Shanker—there is a decline in the enrollment of people who want to study teaching as a profession. I think it may reach a catastrophic situation if it continues to go as it is. What are the—I know one of them is economic. People don't have the money and they can't go to school. I think another is the salary level that teachers are paid makes it less attractive, but don't you see this as a real problem that our Federal Government particularly, and in cooperation with the State governments, has to face up to? Otherwise we are going to have a real problem in being able to even offer education to kids.

Those are the two questions.

Mr. **Shanker**. I would like to respond, really, to three points that you made. I appreciate the point of your first one. We do know that we have plenty of problems out there, but I still think that even research on the facts does some good.

For instance, we know that in the 1970's that the gap between minorities and whites in terms of reading was very substantially reduced. We don't know exactly why. I would hope that we had done research that would be more specific, to show that some of the programs were partly responsible for that. We also know that we now have a new tightening of standards, and I have some guesses that that will only help a certain number of students and will not help any others, but we won't know whether my guesses are right or whether the administration's are right or others' are right unless somebody collects that information.

So while the general point that we have substantial facts about the major problems is true, there are still changes constantly in how well or how poorly kids do. There are changes in dropout rates. There are changes in various performance scores, and it is important to know those. It is especially important to connect those up with different things that we do, to see what does make a difference.

I agree with your point that we don't provide equal educational opportunity. The computers were a good point, and certainly the tremendous gaps in dollar expenditures, percentage of teachers, math teachers in different districts.

On the enrollment of teachers, the news on that is somewhat better than it was a few years ago. The issue is complex. At the time "A Nation at Risk" was written 5 years ago, only about 4 percent of the kids in college said they wanted to become teachers. More recent polls show that that is now up to about 10 or 11 percent. We will actually need about 23 percent of all college graduates for the next 11 or 12 years, given the number of teachers who are retiring and leaving for other reasons.

Part of the reason is money. Part of it has to do with working conditions and satisfaction. Part of it has to do with alternatives elsewhere in the economy. Part of it has to do with the fact that in the midseventies there were a lot of teachers being laid off and dismissed because of declines in enrollment and also because of the economy, so a lot of college kids got the idea that this is a bad field to go into. Now that they read about shortages and they read about the interests of Governors and State legislators, many more of them are lining up to come in.

Very important, though, is the question of how many, as you have indicated. The other important question is, who is coming? Are they people who should be teachers? We have very little information on who they are and what the standards are. There has been one effort by OERI to survey the States to see what kind of testing or screening devices there are. We know that these devices are at this point very low, but also that is another bit of information that we need.

For instance, can a person become a teacher if they merely get a 65 percent on a sixth grade arithmetic test? Well, in some States that is the case, so you might have an adequate number. See, there is never a shortage if there are no standards, and so the question—now what we ought to do about it, it seems is clear. You have indicated in your question a few of the things, but how many teachers we have to some extent depends on college assistance programs, grants and loans, and if we cut off the number of youngsters going into higher education, there will be fewer.

I think the other issue is incentives. If we have a field where we feel that it is socially desirable to direct students, we ought to have programs—there are some, but they are very inadequate—which will wipe out college loans for those students who agree to teach for a certain number of years, especially in areas of shortage. There are just not going to be enough mathematicians and scientists in the next couple of years to take care of the needs of the military and private industry and the public sector, so you have to have some sort of a mechanism, I think either college scholarships or payment of loans or some national incentive is needed here, not so that they come with the schools forever because they are needed in these other fields, too, but at least so that we get a part of the time.

Ms. **Chelimsky**. I would like to speak to your first point, if I can, the business about we know the facts and we don't need any research, we don't——

Mr. **Hayes**. I didn't say we didn't need it, but I said some——

Ms. **Chelimsky**. I know. I understood your story, but it seems to me that one of the problems that you face when you make policy here is that everybody thinks they know the facts, but those facts are often very different. What research does for you basically is, it looks at the magnitude and the direction of what is in fact happening, so you can get a sense of how big the problem is from everybody's point of view and whether it is changing, and whether it is getting worse or getting better, and as Mr. Shanker just said, what the interactions are with the kinds of things that you are trying to work with.

So it seems to me that even when you think you know the facts, if it is just what a group thinks, then you don't really know them, and you can then be in a position where you make policy that isn't going to last because you are going to have to come back and look at it again, so it seems to me that it is hard to make the case. I do agree there are many areas where we have done plenty of research, and we know what the answers are and we should move with those, but I don't think that is the case for everything and always for the things that people think it is.

Mr. **Hayes**. Mr. Timmons.

Mr. **Timmons**. Thank you, Mr. Hayes. Just a quick comment on your point about the shortage of teacher candidates. You did not mention, but I think it was implicit in your statement that there was an even greater shortage of minority teacher candidates.

Mr. **Hayes**. That's right.

Mr. **Timmons**. And in urban districts across this country we are seeing, of course, burgeoning numbers of minority students in particularly inner-city schools, many of whom are disadvantaged, and a corresponding decline in the number of teachers who are also minority. We at NEA see this as an absolute emergency. I am thinking of a recent study that was released several weeks ago by the American Association of Colleges of Teacher Education, that showed that among the students now in college who are minority, a smaller number profess an interest in pursuing teaching as a career.

Obviously there are a number of steps that need to be taken, some of which Mr. Shanker addressed about teachers in general, to make the profession more attractive. Unfortunately, in one way the education establishment, the schools, have been benefitting by the fact that minority students who were college graduates had few options open to them in the professions, other than education, for many years in this country.

That fortunately has changed for many of these talented individuals, and they are able to pursue options in other professions, in business and academia and so forth. That has frankly been to the disadvantage of schools because with wider choices, fewer of these talented minority people are choosing teaching as a career.

I think there are a number of avenues that need to be explored to improve that situation, including better pay, better benefits, more esteem for teaching as a profession. Every level of government I think needs to play a role in that, including the Federal Government.

Mr. OWENS. I think my first question relates to the point that Ms. Chelimsky was making before about who has the facts, how do you reach consensus on the facts. You also pointed out the need for stability and leadership in the area of educational research and development. Mr. Purves pointed out the fact that a highly desirable activity, what seems to be a highly desirable activity, can't get funding and support.

How do you react to the proposal of Mr. Shanker that an instrument or an organization similar to a national foundation might solve all these problems? The National Science Foundation doesn't have that stability and that ongoing leadership? Are they insulated from political decisionmaking, or would that or something similar to that really be the solution to some of these problems? Would their products and their enthusiasm be more acceptable by the whole range of people who have to accept those decisions—the Congress, the profession, the administration that makes recommendations for the budget, et cetera?

Ms. CHELIMSKY. Well, it is a very difficult problem that you have in looking at that. There is no question about it. When Mr. Shanker was talking earlier about an area where you could go to do good research, insulated to some degree from the political environment, he mentioned the National Cancer Institute or the National Institutes of Health, but they have not solved the cancer problem either, I would point out to you, so that the issue of the outcome and the issue of the structure and the process are not necessarily related. What we are talking about here is how hard the problem is.

Now the issue of consensus, research has a lot that it can do, you know, the charisma of research. What is great about it is that people can agree about numbers to some degree but, as Dr. Coleman said earlier this morning, people have vested interests. It is going to be very difficult, no matter where you are, to get rid of politicization. The people who are producing are going to be interested in research on production, so I think perhaps what you need to think about—I have to admit that recently it seems to me that in the National Science Foundation things have gone extremely well.

They seem to have been insulated quite well in the last few years, but I remember early on when President Carter had set up a directorate to look at whether criminal justice research should be separated from the mainstream of the programs, that finally it was decided to put it in Justice simply because people felt that research, standing on its own would never have a chance to get funds, never have to a chance to get appropriations, so that the issue of how you insulate the research function so that it can avoid being politicized is one thing. At the same time, it needs to be able to survive on the other, and it is not always easy for research to survive when it is standing on its own.

So I think it is a complicated process. I don't think you can ever get rid of politicization entirely, simply because people have their own vested interests, so I am sorry to give you a Byzantine answer there but I think it is a complicated question.

Maybe you have something more that you can——

Mr. **Purves**. Well, I would simply comment on my observation of parallel organizations in other countries that, as I mentioned, there are such organizations as the National Foundation for Educational Research in England and Wales. That primarily works as a contractual agency with the Department of Education and Science, whereas the educational research institutes in both Japan and the Netherlands, I think, are more like the National Science Foundation or the National Institutes of Health.

I don't think that they have solved the problems of education in their countries, either, but they do appear to be able to have long-term research agendas which they are able to pursue—and I think this has been a problem—and able, therefore, to project 5 and 10 years into the future, as to what the educational research agenda might be, and I think that has been useful.

Mr. **Owens**. Yes. We don't expect research and development to solve the problem, but how much improvement have we realized as a result? I think, Mr. Shanker, you said that we are operating pretty much as we did 200 years ago and we really have not gone forward as a result of research and development. After 20 years, some labs have been funded for 20 years—I mean centers for research have been funded for 20 years, and some labs have been funded for a long time—we have been at this for some time. You don't see very much useful product having come out of that system?

Mr. **Shanker**. I do see some useful products, especially from the centers. I don't see very much of the labs so I am just not qualified, but one of these centers, for instance, did put out, was responsible for this becoming "A Nation of Readers," and there are centers that devote themselves to other problems. I see their work and I am very impressed with it.

But I think that we are dealing here with—the issue is one that we have a certain way of dealing things. By the way, it is also the way it is, by and large, done in England, France, Germany, and it may very well be why they haven't solved these problems, either. Basically, we have a single model of a school, and all the kids come on a certain day, at a certain age in their lives, depending upon a cutoff date. They all sit still, most of the time, and they listen to a teacher, most of the time.

There are two ways of learning. Either you listen or you read a book, and it is very much—if medicine were to behave the way we behave, it would work something like this: You would go to a doctor and say, "I have a problem." He would give you medicine; 3

or 4 days later you would come back and you would say, "Doc, not only didn't I get cured, but look what it did to me," and he would say to you, "You've got a hell of a lot of nerve, not responding to my medicine," and he would say that you are abnormal or something. You know, he would criticize you.

Well, of course doctor's don't. They say, "Well, I'm sorry. I gave you the right thing but it doesn't work on everybody. Here, try this." If that didn't work, he would try something else. In other words, the doctor respects the fact that you are doing the best you can to get well. It isn't your fault, and if you don't do it one way, it is his job to find three or four ways.

Now there isn't any one pill or one medicine that cures people, even of the same disease. Some of them will cure 30 percent, and some of them 15, and some of them 20. Well, that is what education is like. Nobody learns the same way. Nobody is going to learn from the same lesson. Nobody is going to learn from the same book, but that is not the way we organize schools. We say, "You better learn from the same lesson, because I don't have the time to teach 20 or 30 of you separately, and I don't have the time to go over it tomorrow, and I don't have all sorts of different materials."

All we have is this one textbook, so all I have is this one medicine, and if this one set of educational materials doesn't work on you, then pretty soon you are going to start feeling stupid—that is, the kid is who doesn't get it the first time or the first way. Once he feels stupid and feels he can't do it and stops trying, the whole thing is over. You don't keep the kid in the game because education is not like one of these cups here, where I am filling the kid up. If all he had to do was sit still and I would fill him up, it would be easy. He has to be engaged and involved. He has to do the work.

Now the problem is, we know that this model only works for about 20 percent of the kids. Look at the NAEP research. When you test kids who are 17 years old—the dropouts have gone already, so these are the kids who are about to graduate—what percentage of the kids can write a simple letter to the supermarket down the block, giving two reasons why they should be hired to get a job? What percentage of graduating kids can do that? Twenty percent.

What percentage of the graduating kids can look at the railroad timetable from Washington, DC to New York, and if you ask them, "What train do you have to catch from Philadelphia to Washington to get here by 6 o'clock, what time do you have to catch that train?" What percentage of these graduating seniors can read that timetable—4.9 percent. If you take all the blacks and Hispanics out of the sample, it is 5.9 percent for whites.

What percentage of these kids can take six common fractions and arrange them in size places—12 percent. Now the evidence is—I mean, it is true that minorities and very poor kids are even further away from this, but the fact is that we are educating about 20 percent of the kids, not to Shakespearean standards or probability theory or scientific understanding, but to a level that one would consider one needs to deal on a day-to-day basis with people on a job or just in terms of being a citizen.

Now all sorts of new books have been tried, and new ways of talking to kids, and new ways of rearranging little seats and things like that. Now what is wrong is that most kids can't learn the way they are being taught, and what is needed here is an encouragement not just of the research that says, "Go out and see what they have been doing for 200 years and see what you can change a little bit." What is needed also is the encouragement of totally different types of models, which take into account that kids are different and learn differently. We don't have much of that.

Mr. OWENS. Ms. Chelimsky, the department says they have sought increases in their budgets for congressional appropriations—I mean, they have sought increases in their budgets but congressional appropriations have fallen far short of these requested levels. Did your study find this to be true?

Ms. CHELIMSKY. Well, we looked at that outside the study a little bit, and what we found was that over the 9-year period from 1980 through 1988, the appropriation was less than the request for 6 of those years. The differences ranged from about $400,000 to $11 million, or from 1 to 12 percent of the request. There were only 2 years, 1985 and 1987, in which the administration asked for increases above the previous year's request. For these years, appropriations were higher than the previous year's appropriation but they still fell short of the administration's full request, so 2 years were the only times when that was really not the case.

Mr. OWENS. Relative to other Federal departments or agencies with similar missions, how have the research statistics and evaluation functions within the Department of Education fared in terms of their budgets? In particular, how does the trend for educational research compare with research and development in the Department of Defense? Perhaps you could give us right now some kind of rough estimate, but later on you could elaborate on it in writing for us?

Ms. CHELIMSKY. Sure. Well, in fact, with regard to the other agencies, there really is a lot of variation there. Some of them have gone up, very few. In general, most of them have gone down, but education has really been sorely tried among those. Of the units that lost resources, education had the fifth highest percentage loss out of nine for research, and the seventh highest percentage loss out of eight for statistics, so you see really highly tried. On the other hand, for educational evaluation—and this really surprised me when I saw it—the percentage loss was smaller than for six other units out eight, so evaluation is still alive in the Department of Education.

With regard to the Department of Defense, those numbers are quite interesting, as you can well imagine. If you include all the defense-related activities in other departments, what you get is that DOD experienced an 81-percent increase in funding for research and development, and educational R&D declined by 36 percent.

Of course, those percentages don't tell you anything. If you want to put these numbers in perspective, you note that the decrease for educational research is about $44 million. That represents about 0.4 percent of the defense increase, which was about $11 billion, so you really get a sense of a little rabbit and a horse somewhere in some sort of stew.

Mr. OWENS. Thank you.

Mr. Timmons, just one last question, and it relates to Ms. Futrell's testimony, where I think she had high praises for the labs. Has NEA been working particularly close with the labs and found them particularly useful?

Mr. TIMMONS. Yes, Mr. Chairman. Our members have reported to us that they have worked in many instances, particularly in the idea of agenda setting—I'm sorry I don't know quite the correct terminology—but in terms of determining just what research needs to be conducted in the regions that the labs serve. As Ms. Futrell pointed out, this is of benefit to our members on a couple of bases. One is that we have a feeling that it tends to have more usable research conducted for our purposes, but it also benefits our members by enriching their careers, by making them feel more a part of the development of education policy and of the gathering of information about education.

Mr. OWENS. So some of the participation in the process of research that Mr. Shanker was talking about is taking place?

Mr. TIMMONS. I believe so, yes.

Mr. OWENS. Thank you very much.

Mr. Bartlett.

Mr. BARTLETT. Well, it is an excellent panel and excellent testimony, and I am very appreciative of it. One hardly knows where to start. Let me just pick up on the last question because it then leads to a whole area that I want to ask both the NEA and Dr. Shanker.

First, let me try to expand a little bit about your answer. You were suggesting that your members have told you that the labs are useful because your members have input into the agenda setting or the priorities of the lab. Do you have any kind of measurement of the response of your members as to the usefulness of the output of the lab?

Mr. TIMMONS. I am afraid I don't have that today, Mr. Bartlett, although we would be happy to gather that information and provide it for the subcommittee.

Mr. BARTLETT. With the chairman's permission, it would be very useful to know if you have any kind of a survey of your membership as to how many, if any, have found the output of labs to be useful in their professions. Of the teachers, then, the professionals that have had some input into the agenda for the labs or the agenda-setting, do you have any sense as to how many of your members that might involve that you have heard from on it? Is it in the hundreds or the thousands or the tens of thousands?

Mr. TIMMONS. Oh, I wouldn't say hundreds or thousands.

Mr. BARTLETT. Less?

Mr. TIMMONS. I am really relying more on a sort of anecdotal recollection of my own in terms of conversations, in no systematic way, with our members, but again I think we can make an effort to gather that information.

Mr. BARTLETT. So in terms of your members' positive feelings about the labs and their participation in the agenda setting, your testimony is anecdotal rather than quantitative? There is no kind of survey of——

Mr. TIMMONS. The basis for my answer is anecdotal on my part. I have undertaken no survey, am not aware of one, although one may very well exist, and we will certainly search for that and provide it if it does.

Mr. **Bartlett**. OK. Mr. Shanker, let me then go on with you about the labs. I guess I was intrigued by your comment, that you said that you weren't qualified to respond about the labs but you found—I am paraphrasing, tell me if this is correct—you found some of the output of some of the centers to be quite useful. Does your organization or have your members had any involvement that you know of with the labs, as far as the output or the results or being able to make use of the output? Do you have any sense as to why you wouldn't feel qualified to comment on the output of the labs that are providing information to teachers?

Mr. **Shanker**. Well, the number of teachers involved in these is extremely small, very, very small, and I just don't know. I mean, I get the materials. The results of the centers are usually books or studies or articles, and I get them and I read them and I find that some of the best stuff that is coming out in the country comes from those centers. As far as the labs, I know it is a very small number of teachers who are involved. That doesn't mean that what they are doing is not good.

I think the problem here is, if there were no problem with money, then sure, have more labs and have more centers and conduct more research, but there is a problem with money and always will be. What you have with both labs and centers is that there is a constituency there. That is, there are institutions, and so whenever the budget is there, they coming running down and say, "Save my program." Nobody was running around here for NAEP for many years, as that got cut back, or any of the other programs.

So in a sense what you have is one set of activities that has a constituency, even though it is very small, and another set of activities that are very important, that has either no constituency or a much smaller one, and so I think you get a disordered set of priorities in terms of how you ultimately slice the money. I am not trying to say that one is bad. It is just that if you have a certain sum of money, you do have to look at whether the decisionmaking process makes sense, and I don't think it has in recent years in this area.

Mr. **Bartlett**. Ms. Chelimsky, do you share that view that the priorities have been disoriented or not correct?

Ms. **Chelimsky**. Well, I think I am concerned about the whole prioritization process. First I would associate myself with what Mr. Shanker just said. I thought that was—those are exactly my views. The worry that I have is how the money is prioritized in terms of the general functions of research. It seems to me that you are sort of eating your seed corn if you only disseminate old research, if you are not looking at what is new. It should be a balanced process.

New work that is going on, development of it, the determination that in fact, yes, it can be trotted out to every place in the country, I don't believe that because you have a new and exciting idea, it should automatically be sent nationwide, so the issue is, when should it get out there? What do you need to do to show that this will work in many different places? And then finally make sure that when you have something good, it is disseminated well.

But it seems to me it is a circular process, and I have the feeling when I look at those numbers that I talked to you about earlier, 89 percent for dissemination, that doesn't make sense to me in terms of developing new knowledge. So it is not so much the substance of the priorities that bothers me, as the way in which the whole process is going on, and how people decide what is important and what is not, what Mr. Shanker just said.

Mr. BARTLETT. And, as I recall, that part of your recommendations the OERI agreed with. Is that correct, that is, that 89 percent was not correct?

Ms. CHELIMSKY. I don't want to push too hard on how much they agreed with us. As I said to you earlier, I was amazed that they agreed with us. Nobody ever agrees with the General Accounting Office, and this time somebody did, so there may be some parts that they agree with less than others, but they did write us a nice letter and tell us they agreed.

Mr. BARTLETT. Let me then rephrase sort of the tone of that question——

Ms. CHELIMSKY. Yes.

Mr. BARTLETT [continuing]. But broaden it somewhat for all four of the panelists, and let me phrase it thusly, and it is in the context of this subcommittee. At some point in 1989 or 1990 we will be reauthorizing OERI and making, I think, some decisions about how to do so to provide for quality educational research in the country and the use of it.

If you were then the OERI director and you didn't have the congressional mandates which I believe, Ms. Chelimsky, you have weighed in against, and you had total flexibility with a $60 million a year plus budget locked in for 5 years, and you could guarantee that if you did something controversial, Congress wouldn't get you fired, assuming you are honest in any event, and you had total flexibility, generally where would you put that money, that $60 million a year in educational research in this country? How would you structure it, or in what areas of activity would you place your priorities?

Ms. CHELIMSKY. Would you like to start? Who is going to start with that one?

Mr. PURVES. I think I would need a calculator, but certainly I think that a portion, I think I would argue that a portion of that—and I am not sure what the exact percentage should be—should go to the regular gathering of data such as NAEP or international and other studies. I think that is a very important aspect, particularly in order to get change data, because there have been changes and I think those changes need to be recorded.

Mr. BARTLETT. So the gathering of comparative data——

Mr. PURVES. Right, over time——

Mr. BARTLETT [continuing]. Over time.

Mr. PURVES [continuing]. And both within, between segments of this country or sections of this country and with other countries is, I think, an important aspect, but how much of that $60 million, I am not sure that I could give a precise percentage, but I would make a pitch for that.

I also would agree—as I think Dr. Timpane said earlier—that there needs to be a good mix between the type of organized center, research center, that now exists and the field-initiated or individual scholar approach to research. I think as I have seen things over the past few years—you could correct me if I am wrong—but I think the bulk of the research money has gone to the organized centers rather than to field-initiated research.

Ms. **Chelimsky**. Yes.

Mr. **Purves**. And I think that that proportion should be changed.

Mr. **Bartlett**. Mr. Shanker.

Mr. **Shanker**. I think I will follow suit by just making a suggestion for one piece of the money. I do have a suggestion at the end of my written testimony, which suggests that—I am not usually one to propose committees or commissions, but I think that it might be a good thing to ask whether there is a better way of putting this together. I think the things that were said about National Science Foundation and NIH and the others are all valid. There is no perfect way of doing it and there is no perfect model, but I think that it is time to rethink the structure and see—I have a feeling that if it were rethought we would come up with something different and, I hope, better than what we have now.

I would just agree with what has been, the portions of money that have so far been suggested, and say that I think that in addition to funding research which is designed to get information about what is now happening and improve what is going on in the current model, that there needs to be some sum of money set aside for the creation of new models and new approaches, with a very careful monitoring of those, and that is practically nonexistent. I think that is an important thing to do.

Ms. **Chelimsky**. I would like to echo a little bit what has been done here. I am not sure how I would divide up the $60 million. I do think, though, that a certain amount needs to go to research statistics and evaluation of the kind that we were talking about earlier, in other words, to measure what is happening, what our problems are now. I have the sense that it is very important to have a wider view of where the problems are so that we don't just set our priorities in terms of what somebody happens to say that day is a problem. In other words, How big is the problem? Where is it? How does it manifest itself? Is it something we can do something about?

With regard to what the priorities are, I remember the panel just before us had some priorities that they thought were pretty important: urban schools, the difficulties of—ones that you just brought up, I think you did, Mr. Hayes—of how do we get teachers and things of that sort. But when you start to think about them, there are so many that I go back to the issue I raised. It is terribly important to get a process going whereby the priorities can be justified in research terms: These are the problems, these are the important problems, and this is where we should be putting our money.

So I would sort of beg off a little bit and say that if I had that process going, I would be a lot happier about it. I would not like to see a very small amount of money being sent into a large variety of things because I just don't think you can get a payoff from research that way.

Mr. Bartlett. Was it your conclusion that that is a valid criticism of the funding now, that it is——

Ms. Chelimsky. Well, that is certainly for the—I know that they want to get some diversity in the field, in the research ideas that come in from the field, but there is so little money that is going into that, that it seems to me that it is very unreasonable to expect that research to yield a great big bang for the buck. I worry about so very little being said about it that way. I would rather see the money concentrated.

Mr. Bartlett. More concentrated than it is today?

Ms. Chelimsky. Oh, yes. Oh, yes, and prioritized in a way that people can understand. Mr. Chairman, I am not suggesting we will get universal consensus, but it does seem to me that you will have to—you know, you pay your money and you take your choice.

Mr. Timmons. Recognizing this may be an incomplete answer, I would like to refer you to Ms. Futrell's prepared statement in which she points out that, first of all, education research should not be too far from the idea of policy in the application of research, and that it incorporate in our view three really important priorities, the first being the need to grant greater autonomy to education professionals; the second, greater attention to the needs of students at risk; and then finally the need for innovation and experimentation at the local level which is focused on education programs, to help develop thinking skills, collaboration skills, and basic skills needed to engage in lifelong learning.

Mr. Bartlett. Thank you, Mr. Chairman.

Mr. Owens. Again, I want to thank the members of the panel, and particularly Mr. Shanker and Mr. Timmons. Any data that you have on teacher practitioners and other educators, their views on the products that come out of the centers or the interaction with the labs, we would greatly appreciate receiving information of that kind. This committee hopes to issue a report on our activities in these hearings, and we would be very appreciative of any information from teachers in the field or educators in the field that you can supply us with. We thank you very—yes?

Mr. Hayes. Could I have just one moment?

Mr. Owens. Mr. Hayes.

Mr. Hayes. I would appreciate it, Mr. Chairman, if Mr. Shanker could send a little note to indicate the reaction of his organization on the possibility of a minimum teacher salary regulated by the Federal legislature.

Mr. Shanker. All right. I will think about it. Thank you.

Mr. Owens. Thank you again, very much.

Mr. Shanker. That's what a lot of them get, the minimum salary, minimum wage.

[The response to Mr. Hayes' inquiry follows:]

The American Federation of Teachers has no position on a Federal minimum teacher salary.

It is my view that while such a law would have a small initial effect upon the entry level salary for teachers, in the long run, we would be compelled to spend a lot of time and effort seeking needed increases. As you know from experience with the Federal minimum wage, increases are hard to come by and usually are well below the rate of inflation.

Entry level teacher salaries have risen substantially in recent years and we are hopeful that they will go higher. Federal legislation does not seem to me to be a promising route for achieving the increases in entry level salaries we both know are needed.

Mr. OWENS. Our next panelist will be the Assistant Secretary for the Office of Educational Research and Improvement, Mr. Chester Finn. I think Mr. Finn wants to set up, so we will take a 5-minute recess for the setup of any audiovisuals.

[Recess taken.]

Mr. OWENS. The hearing will come to order.

Mr. Secretary, we want to thank you again for waiting, and thank you for remaining in the room and hearing testimony, so that we are way ahead of the game, I think, as a result of your having heard most of the previous testimony. We have your written testimony in all of its bounty and certainly will do a thorough examination of it. You may proceed.

STATEMENT OF CHESTER E. FINN, JR., ASSISTANT SECRETARY FOR THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT, DEPARTMENT OF EDUCATION

Mr. FINN. Mr. Chairman, it is in part because of my affection for you that I am not going to read my prepared statement. I appreciate your willingness to put it into the record in its entirety, together with its attachments.

I thank you and I thank Mr. Bartlett for the hearing. One of the reasons that our written submission is so bounteous, at least in quantity, is because this is a rare event. The administration has been saving up information for 20 years for this hearing, and we didn't want to deprive the subcommittee of at least a reasonable sampling of that which we had been accumulating.

This is an important event. We really appreciate the care that you have taken in arranging it, and the amount of time that you are giving it, and the amount of care that you are giving to the subject, and the amount of interest that you are taking in the subject. I would like to suggest that you consider expunging from the record of this hearing the phrase "checkered history" on each occasion when it has been used. Your predecessor in the Chair of this subcommittee once found himself slightly embarrassed when he used that phrase, and wasn't absolutely certain why people were laughing.

But we appreciate the congressional interest in these matters in particular because among the problems that education research has had over the years—these last two decades, frankly—has been a dearth of champions in Congress. It needs them, and it hasn't always had them.

You have also had supplied for the record some other recent sort of musings that I have had on this subject. One is attached to the statement, from The Educational Researcher. The other was the text of a speech at the American Educational Research Association about a week ago. In combination, these set forth most of my concerns about the current state of educational research in general and of course about labs and centers in particular, that being your special focus here today.

Overall, I don't think things are in good shape. The Federal Government isn't the only or even the primary reason for that, but it is certainly part of the reason. Other parts of the reason are to be found in the priorities and attitudes of the education research community and in the practices and attitudes of educational practitioners and policymakers. I don't know that we can solve all of these problems. That is why I am a little bit discouraged.

Let me pose the problems in terms of three blunt and somewhat oversimplified statements. First, much needed educational research never gets done. Second, much of the research that gets done isn't very good. Third, much of the good research that gets done doesn't get used, at least doesn't get widely used.

There are plenty of welcome exceptions to each of these generalizations. Some good research does get done, and some of the good research that gets done does get used. We could give examples. Insofar as you can cite examples in terms of printed and published items, I have brought with me today a small sampling of the products of the labs and centers that I think are good products. There is perhaps a larger pile that I didn't bring because I didn't think as well of them, but among the more impressive products of our labs and centers are the items on the table with me today, which the subcommittee may have as many of as it can handle.

I think that it is important as we focus on labs and centers to note, as has been noted in this hearing, that they have been around for almost a quarter century. In the aggregate, they have received close to $600 million in Federal funds over their life. This is not much compared to big science and defense spending, but $600 million isn't chicken feed. As is clear, I don't think we have gotten enough return on that investment. I am not saying the money has been wasted. I am only saying that it hasn't been spent with maximum productivity.

A larger point, though, is that these basic structures that we call labs and centers have not been rethought for almost a quarter century. Just because they made sense once, doesn't mean they necessarily make equally good sense today. A lot has changed in their environment. That we had them yesterday and that we have them today does not, per se, mean that we should have them unchanged tomorrow, and whether we have them or not, they surely aren't all that we should have tomorrow. It makes no sense to rely almost exclusively on two kinds of relatively sizeable institutions to conduct and disseminate research. Our research and dissemination portfolio is woefully unbalanced and it is getting more unbalanced, not less.

Let me pause for a moment and show you in graphic form, thanks to my colleagues, and in particular Shelley Reed, who agreed to flip charts. She usually does other things. The first chart that you are gazing upon is 15 years of OERI funding history. Those are the tall bars, and the shorter bars to the right are the lab and center portion of the total research and statistics budget over the last 15 years. On this chart you can see both what has happened to the total and what has happened to the lab and center portion of it, over time.

The next chart displays our current appropriation, fiscal year 1988, and what we are doing with it. I might note that this is about $4 million less in total than we had asked for from the appropriations committees. We ended up with $67.5 million, a little bit more than the $60 million budget that Mr. Bartlett was giving my predecessors here to spend a few minutes ago, and this shows the allocation of it. It is a pity that I am colorblind, but what I think is the pink part, the upper part there, is the lab and center portion of our current appropriation. Most of the bottom part is statistics and national assessment and ERIC, the little white sliver on the right is everything else. That is the 1988 appropriation for OERI.

This one shows, simply for the last three years and for our current budget request for fiscal year 1989, now pending before Congress, how we have allocated our budget in the aggregate and the lab and center portion of it as well. Now on the left of each of those bars is the statistics and national assessment part, which has been growing consciously on our part. The right bar for each of those years is everything which is not statistics and assessment, and the lab and center portion is the bottom chunk of each of those bars. The little portions at the top are the other things, and the tall bar on the right, as I say, is a request; it is not an appropriation. That is for fiscal year 1989.

Finally, I brought you comparative information from other agencies. Now this shows not amounts. Those would go up to the ceiling and out the roof of the Rayburn Building, if we showed the amounts for some of the other agencies compared to ours. This shows the way other agencies apportion their research funds, as between large centers and individual grants to individual researchers. OERI is on the far left. The yellow represents large centers. The red represents individual researchers. The other major research agencies of the Federal Government are shown in the other vertical bars here: National Science Foundation, National Institutes of Health, Department of Energy, Pentagon, NASA, Agriculture Department.

This shows how they apportion their funds as between individual researchers and small projects on the one hand, and large center-type projects on the other hand. I thought this would be useful. We also have in the background of the prepared remarks, the numbers that go with these. This is simply the visual presentation of it.

That is the graphics. Let me explain now why we rely so heavily on labs and centers at the present time. There are two reasons. The first is that we inherited, in 1985, a set of competitions that were already underway, and we vowed to make good on those commitments, the commitments implicit in those competitions, and we have done so. We made the awards and we have funded the projects, and these were 5-year projects. This is in general, in most cases, the third year of them.

Additionally, though, minimum spending levels for centers and for labs figure in our authorization law, and despite repeated administration requests for significant funds in other categories, the amounts that have been appropriated for education research and improvement in recent years have, for all practical purposes, been identical to the sum of the minimum spending levels for the labs and the centers. That is to say, nothing else has been appropriated except a few minuscule amounts here and there, over and above the lab and center minimum spending levels. As I have said to you before, ours is the only part of the Education Department that, year in and year out, gets less money appropriated than the President requests for it. Most parts of the Education Department have had the reverse experience with their budget and appropriations.

As we look a couple of years do the road, the current contracts with the labs and the current grants to 10 of the centers—we have 19 centers now—but grants to 10 of the centers expire late in 1990, calendar 1990. What is to follow at that point? Ought we take for granted now, in 1988, that 9 fresh lab contracts and 10 fresh center grants need to be made in 1990? Why assume this? Is this the best possible use of the resources? Are these the best procurement mechanisms and arrangements? Are they the only ones?

It is important to raise these questions in 1988 because the lead time for these kinds of procurements is very long, and if these procurements are to be made in 1990, plans, concrete plans, have to be made very, very soon. They don't wait until 1990 to start the planning process.

In my own view, we should be more open-minded and more flexible and more creative. There may be other arrangements that would do the job better, maybe in league with, maybe in addition to, maybe instead of labs and centers that follow the familiar lines.

It may just be that in an age of increasingly active and competent State education agencies in many of the 50 States, in age of electronic communications allowing instant interchange anywhere in the world, it may be that the regional basis, for example, of the labs is archaic; that it made sense in the midsixties; that it doesn't make sense in the late eighties. It is just possible. It may be that these institutions that seemed very necessary in the midsixties, when practically nobody else was engaged in the interpretation and dissemination of educational research, it may be that they are now rivaled if not superceded by other organizations and entities.

As for centers, it may well be that some of the issues and topics that most need systematic inquiry by researchers ought to be getting examined simultaneously through multiple research strategies, even rival research strategies, based on different disciplines, employing different research paradigms, grounded in different assumptions. It may be that we need to help ideas and research plans to compete with each other, rather than to continue forcing all our eggs into these tidy baskets.

Similarly, it may be that the insistence on basing all research in universities makes no sense in an era of think tanks, of independent research institutes, and of education agencies and associations that have highly skilled research units of their own. Above all, in the domain of research we need to be wary of supposing that all wisdom resides in Washington, that the field is incapable of devising more promising approaches and more interesting hypotheses, and that the well-known scholars in well-known institutions who typically win center competitions are the best, much less the only people who should be helped to furnish us with insight and knowledge.

Well, you have opened up a big topic and what I have said thus far only touches the tip of it, but I am grateful to you on the subcommittee for opening this line of inquiry. It is very important. It is very timely. I don't think the status quo is satisfactory.

I would be pleased to respond to your questions. A fair number of the people remaining in the room are colleagues of mine from

OERI, most of whom know a good deal more in detail about labs and centers and other things than I do, and I am not going to hesitate to call on them as soon as you prove that you can stump me or that they know more about one of these things and should be answering your questions.

Thank you very much.

[The prepared statement of Chester E. Finn, Jr., follows:]

Testimony of Chester E. Finn, Jr.
Assistant Secretary and Counselor to the Secretary
U.S. Department of Education

before the
House Subcommittee on Select Education

on

the Regional Educational Laboratories and Research Centers
funded by the Office of Educational Research and Improvement

April 20, 1988
Washington, D.C.

Mr. Chairman and members of the Committee, I welcome the opportunity to speak to you today about the Regional Educational Laboratories and Research Centers that receive funds from the Office of Educational Research and Improvement. In FY 1988, the laboratories and centers together are consuming $38.6 million, or 57%, of OERI's appropriation of $67.5 million. This figure constitutes over 94% of the OERI budget not devoted to the Center for Education Statistics, NAEP, and ERIC. In terms of dollars, these entities represent the Education Department's primary contribution to education research and dissemination outside of funds spent on disability, rehabilitation, and special education research.

Congress has taken a zealous role in earmarking funds for these institutions, and it has severely limited the Department's control over their activities and budgets. Yet since the inception of these entities over 20 years ago, the Congress has never held an oversight hearing to determine their efficacy. It is entirely appropriate, therefore, that your subcommittee should consider whether and how well these entities fulfill their mandates and whether we are getting a sufficient return on our investment in them.

I intend to do several things in this statement. First, I will describe what the laboratories are, provide a brief history of them and sketch their basic structure, function, and recent management under OERI, then will do much the same for the centers. Through this section, similarities and differences among the laboratories and centers will emerge, as will observations about their products, impact, potential, and limitations. Second, I will delve into the issue of research and dissemination productivity as it relates to laboratories and centers. Finally, I will reflect briefly on future roles of the laboratories and centers, and some of the variations and alternatives that seem to me worth considering.

Let me start with a few personal comments. When I thought or wrote about the laboratories and centers before I came to OERI, I tended to group them all together in a single category. I now have clearer distinctions in my mind about what each species is and does, and these have become even clearer since the 1985 recompetition. I also see vast differences among the laboratories and among the centers. Such differentiation is important for a thorough analysis of our education research and dissemination funding efforts, and I hope these distinctions are clear in this testimony.

I approach this hearing from the standpoint of a policy analyst much concerned about the condition of education and education research. I tend by nature to have a healthy skepticism toward entrenched structures. Since the early 1950's, federal, State, and local government spending on education has tripled in real dollars spent per-pupil on public education, even while test scores have declined to a depressing level. During the past two decades, overall funding for education research, development, and dissemination in OERI and its predecessors has languished. Yet during this period, there has been a striking persistence in support for the laboratories and centers, such support that their funding has been a fixture in the budget process. But let us be clear: just because these entities exist does not *per se* mean that their current configurations are efficient or desirable.

The Regional Educational Research Laboratories

A regional educational laboratory is defined by statute as an organization "...established by public agencies or private nonprofit organizations to serve the needs of a specific region of the nation..." (Section 405 (d)(4)(A)(i) of the General Education Provisions Act (GEPA), as amended). Theoretically, a laboratory should help education agencies and institutions in its region incorporate into practice the fruits of sound education research and development. GEPA and Department regulations require that these laboratories operate under the guidance and direction of governing boards that reflect balanced State representation in their regions, as well as the interests and concerns of regional constituencies. Accordingly, these boards set the priorities and research agendas for each laboratory, consistent with the priority research and development needs of the Department (cf. regulations at 34 CFR Parts 706-708 and NPRM, *Federal Register*, March 22, 1988, (53 *F.R.* 9408)).

Each laboratory is headed by an executive director, who manages its day-to-day operations. While all laboratories have the same general workscope, there is much diversity among them in terms of personnel, physical location, and approach to tasks. The number of full time professional staff members ranges from 60 to fewer than 10. One lab is housed in a remodelled warehouse near an inner city, another is in a Victorian mansion in a quaint New England school town, and yet another is in the basement of a public elementary school and conducts its activities while school is going on. Some laboratories rely heavily upon consultants and part-time workers to meet their contract obligations with the Department, while others depend almost entirely on their resident staff for such work.

During the past 23 years, the Department of Education has spent some $278 million in support of laboratories. During FY 1988, the 9 existing laboratories, under contracts awarded following a national competition in 1985, will receive $20.8 million, or 30.8% of the total OERI budget (see attachment A for maps of current and previous laboratory locations, and a more formal list of current laboratories; attachment B contains some history of both the laboratories and centers). This was the first recompetition of the labs since their inception in 1965. (Though few Education Department grants or contracts last longer than 5 years at a time, Congress sheltered the labs from competition for two decades.) These laboratories now cover all fifty states plus the District of Columbia, Puerto Rico, the Virgin Islands, and the Pacific Territories. (Before the competition in 1985, nine states were not served by laboratories. These were Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, Maryland, Arkansas; also unserved were the District of Columbia, Puerto Rico, and the Virgin Islands.) The current laboratory contracts run until 1990.

The rationale for spending federal funds in this manner was established when the first laboratories were authorized in the 1960's. It goes something like this: A major barrier to school improvement is the difficulty of getting sound, research-based knowledge about improved practice and methods into the nation's classrooms. An efficient way to do this is to create and maintain specialized organizations that can disseminate this knowledge and provide training and technical assistance in its application.

OERI is not always the sole provider of funds for the labs. Many enjoy grants and contracts from other branches of the Department and other federal agencies. The laboratories also obtain revenues through awards from State and local education agencies, and even organizations from the private sector. The Northwest Regional Educational Laboratory, for example, located in Portland, Oregon, had a total budget of $7.1 million in 1987, only 44% of which came from OERI.

Purpose

The purpose of a laboratory is to help educators and policymakers use research-based knowledge to improve teaching and learning. After extensive consultation during 1984 and 1985 with scholars, policymakers, and practitioners during the recompetition process, the Department established six "premises," or principles on which each laboratory should operate. These form the basis for the current missions, functions, and governance structures of the laboratories and are part of their five-year contracts. The premises are that the laboratories will: (1) focus on school and classroom improvement; (2) emphasize dissemination and technical assistance; (3) engage in applied research and development to the extent that these strengthen their efforts at school improvement; (4) serve designated regions; (5) have independent governing boards; (6) be part of a nationwide system. The actual work they perform is organized, in turn, around five more specific tasks based on these six principles. (Attachment C contains a listing of these tasks and examples of the types of activities associated with each task.)

The laboratory competition held in 1985 was built around these principles. The nine laboratory "corporations" that emerged from the competition serve ten regions. The tenth region, consisting of Hawaii, the Northern Mariana Islands, American Samoa, and Guam, is currently served by the Northwest Educational Laboratory, which is charged with building the capacity of that region to develop its own laboratory in the future. The Virgin Islands and Puerto Rico are presently served by the Northeastern region laboratory.

As noted earlier, the laboratories -- at their own insistence -- operate under multi-year contracts rather than grants. Several consequences result when OERI uses this funding mechanism. The government must negotiate all changes in proposed laboratory work. This gives OERI some influence over laboratory activities, and allows OERI to monitor these activities through progress reports. On the other hand, renegotiating aspects of laboratory work is time-consuming and allows the laboratories to be obstructionist if they choose to be.

Products and Activities

The production and dissemination of research and development products are among the laboratories' functions. Since their current contracts began in 1985, each lab has produced about 45 to 50 products, including briefing papers, research syntheses, and instructional materials. Examples include "State policy briefs," which provide information on current education issues in the States; research syntheses on a variety of topics; and instructional materials, including resource guides and manuals for teachers.

Laboratories also provide a variety of services within their regions, including: seminars on various topics; workshops for practitioners; and presentations at regional and national conferences and conventions.

Generally, the products and services of each laboratory are determined by its governing board on the basis of perceived regional needs. Except for a few products in the area of higher order thinking skills and State policy, the labs have not collaborated on a nationwide basis on the development of research-based products.

Impact on the Educational Community: Limitations of the Laboratory Structure

The ultimate beneficiaries of lab products and services should, of course, be students. What they learn is all that finally matters. Information from labs, however, typically follows a long and circuitous path before ever reaching students. Initial recipients of products or services are usually officials at State Education Agencies (SEAs) and other "intermediary" levels of education. For example, information about school improvement may be disseminated from a laboratory to schools through an SEA. A lab may also train, at the State level, those who will provide training at the local level. This filtering effect is a result of an "indirect service" strategy that was formally incorporated into the laboratory program by the Department in the 1985 recompetition. The rationale is simple. There are many school districts that might potentially benefit from a laboratory's services. Therefore, it appears to make sense to distribute laboratory services through intermediaries that can spread them more widely and thus "leverage" the investment in the labs.

But it is difficult to determine empirically the success of this "trickle down" strategy. As information is transmitted through intermediaries, it is diffused, diluted, and altered. In some cases, educators at the local level are unaware that this information even originated in a laboratory. Under certain circumstances, the laboratories work more directly with school districts. For example, a laboratory may conduct an experiment with a school improvement or analysis strategy on a pilot basis in a local school. Research for Better Schools, the laboratory based in Philadelphia, is helping the Maryland State Education Agency study the impact of increased graduation requirements by doing an in-depth study of how these requirements are affecting students, teachers, counselors, and administrators in five selected Maryland high schools. And, on occasion, a laboratory service will be of direct benefit to State officials, who will then transmit some service directly to a local school. The Appalachia Educational Laboratory in Charleston, West Virginia last year provided the Virginia Department of Education with a policy paper on pre-kindergarten education that is assisting Virginia officials in the development of a statewide pilot program for education and care of four-year-olds. But such examples do not provide us with a general measure of laboratory impact on education.

Another reason assessment is difficult is that laboratories sometimes focus their attention on geographic areas that do not have a sophisticated research and development capacity. As a result, they often devote less energy to serving large cities and more to smaller urban or rural areas. Laboratory services thus frequently serve more limited and less visible audiences. In addition, my impression is that laboratories are generally wary of directly serving governors and State legislatures. The reason given for this is that serving elected officials would threaten the laboratories' working relationships with State education agencies. This is unfortunate, given that governors and legislatures represent powerful "leverage points" for education improvement; laboratories might be more efficacious if they did not shun them.

Finally, the fundamental assessment problem flows from the fact that American education is itself so vast, diverse, and decentralized; it may be unrealistic to expect a handful of institutions using an indirect service approach to affect many school districts nationwide.

Evaluating the Work of the Regional Educational Laboratories

Over the years there have been some limited assessments of laboratory impact. While these have, by and large, reported positive impact by the laboratories, the studies' usefulness is limited. For example, the Service Delivery Assessment was conducted by the Education Department in 1982. In that assessment, the overwhelming majority of respondents who were able to estimate the overall impact of a lab on their state, district, or school indicated some degree of positive impact. But more than 60% of the respondents were not able to estimate any impact. And as I travel the country, I continually encounter governors and legislators who don't even know there are laboratories serving their regions, let alone what those laboratories have accomplished!

Last summer, OERI conducted an external review of the laboratories that revealed similar difficulties in assessing laboratory impact. Review teams reported consistently favorable impressions of the laboratories among selected constituents in the laboratories' regions, but again the reviews did not yield hard evidence about the impact of lab services and products.

Recent OERI Management of Laboratories

OERI has taken several steps to strengthen the management of the laboratories since the contract period began in 1985. First, the laboratory program was housed within a single division of OERI so that policies and procedures could be administered in a systematic and consistent way. A team of experienced OERI staff members was assigned to the laboratory program, with each member serving virtually full-time as an institutional liaison for one laboratory. The liaison's job is to implement OERI laboratory policies, to provide technical direction for the laboratory programs, and to serve as the contract officer's technical representatives. (The contract officers, of course, work in the Department's Office of Management.) These efforts have enhanced communication and cooperation between OERI and the laboratories. In addition, during the past two years OERI has developed, over the objections of the laboratory directors, a formal evaluation plan for each laboratory's program. The plan has three parts. First, each laboratory is supposed to conduct a self-assessment. These assessments are primarily for the benefit of the laboratory's own governing board and management. OERI will review these assessments as well, primarily to determine the extent to which the laboratories use information sensibly in their own management and decisionmaking processes. Second, through systematic monitoring and peer review, each individual laboratory is to be evaluated by outside professionals. The last component of the plan provides for a program-wide evaluation of laboratory impact as a whole.

At present, the labs are only beginning to conduct self-assessments. As for the evaluation by outside professionals, we have already conducted one such examination--the review to which I alluded earlier. Prospects for future evaluations are severely constrained by OERI's current budget situation. And, for the same reason, we have had to postpone the program-wide evaluation of laboratory impact. This is tragic, yet but one of many OERI programmatic casualties that resulted when the Congress appropriated for fiscal year 1988 a smaller sum for research and statistics than the President had requested and when it earmarked an additional $3.83 million from our reduced budget for the laboratories for the so-called rural education initiative. Not to put too fine a point on it, the additional money given to the laboratories has, among many forms of damage to our program, crippled our ability to evaluate the laboratories themselves.

As an adjunct to our formal evaluation plan, I appointed an external Laboratory Review Panel to help us with our deliberations. Christopher Cross, former Minority Staff Director of this Committee, serves as chairman of the Panel. The Panel, whose members include representatives of local and state education agencies, and the private sector, has already produced an extremely useful report that discusses both the external review conducted last year and many of the program-wide issues facing the laboratories (attachment D). Among the concerns noted by the panel are the following: lack of clarity in the lab mission statements; a need to examine further the indirect service strategy; and a need to reduce paperwork associated with the non-OERI work laboratories do.

I regret to say that, for all its usefulness in advising us, continued Panel evaluation of the laboratories is, along with the various aspects of the formal evaluation plan, in jeopardy due to our budget situation. Should such a review mechanism fall by the wayside, our knowledge about the operation of the laboratories will continue to be impoverished, and the Department will be hampered in its ability to manage these institutions.

OERI Plans for 1990 Laboratory Recompetition

Under current law, OERI is obliged to spend at least $17 million per year on regional laboratories. Since most of the existing laboratory contracts expire on November 30, 1990, OERI is considering holding a recompetition to make new laboratory contracts effective December 1, 1990. (The North Central Laboratory contract expires in 1989. We may seek to extend this contract by one year so that all laboratory contracts will expire simultaneously.) To meet this deadline, active planning for the new competition will begin in the spring of 1989. By then we should have received whatever evaluation materials are available on each of the laboratories. We have also budgeted $75,000 in FY 1989 for a systematic round of meetings with laboratory clients and constituents to solicit their views about the program. The Laboratory Review Panel will also be involved in the planning process. We anticipate that a Request for Proposals will be issued early in 1990. The proposals we receive will be reviewed during the summer of 1990; this step will be followed in the fall by contractor selection and standard negotiation procedures. (Attachment E contains a more formal, albeit still very tentative, timetable for the recompetition.)

Educational Research and Development Centers

A research center is an organized group of scholars from several disciplines, based at a university, charged with illuminating through systematic inquiry a specific area of education, such as reading, writing, testing, or teacher education. The topics for investigation are chosen by the Education Department after extensive consultation with researchers, practitioners, and policymakers, and are deemed of authentic significance for the improvement of education. At present, OERI supports 19 centers with grants totalling over $18 million (see attachment F for a listing of all present centers and attachment B for those that existed before the 1985 competition).

A center is normally housed on or nearby a university campus, but it is distinguishable as a separate unit with its own offices. A center's activities are managed by a director, who is a university faculty member. Between 5 and 20 university faculty members or other scholars conduct research or engage in writing in connection with the specific projects being carried out in each center. As with similar research units within a university, graduate students and others may assist center researchers on projects.

Since the first centers were established in 1964 (see attachment B for more history of the centers), the federal government has invested more than $313 million in these entities. This year's expenditure of $17.8 million for 18 OERI-supported centers (not including the science center, which is funded by the Secretary's Discretionary Fund) represents approximately 38% of OERI's total budget. During the past 24 years, the Congress has chosen to fund education research primarily through centers, presumably on the assumption that a group of linked scholars examining a specified problem area can be more effective and efficient at reaching sound conclusions than can a like number of individual researchers separately pursuing the same or kindred topics. As a result of this strategy, individual education scholars have been virtually ignored over the past two decades as funds have been continually earmarked for laboratories and centers, while funds for other modes and categories of research have eroded. Most of the centers remained unchanged and unchallenged from their founding until

1985, when a major new competition was conducted. Only two of the centers existing in 1984 were continued as a result of that competition. The 10 centers awarded in 1985 received 5-year grants which expire in 1990. We anticipate another multi-center competition in 1990, though we will have had almost as much center competition activity between these 5-year events as during them. In fiscal year 1987, for example, we launched 5 of the 19 centers in place today; in fiscal year 1988 we intend to start 2 more; and our budget submission for fiscal year 1989 envisions competitions for another 2 new centers.

Purpose

Like the laboratories, the basic purpose of centers is to improve teaching and learning in the classroom. But the centers seek such improvement by focusing more on academic research in stated areas than do the laboratories.

For the 1985 center recompetition, the then National Institute of Education prescribed several broad categories of activities in which all centers should engage. First, each center is expected to exercise leadership in its mission area, and to do so by building a research program on new knowledge, raising questions that will frame the future research debate, and supplying information on its mission area to those who request it. Second, each center is to conduct programmatic research and development via sustained, interdisciplinary inquiry into a significant educational problem or objective. Third, each center is to attract to its mission area the continuing attention of top notch researchers. Fourth, by establishing working relationships with practitioners and researchers, each center is to facilitate long-term interaction between researchers and educators. Fifth, each center should be part of a national network of scholars that shares accumulating knowledge. And sixth, each center is to engage in an active dissemination program.

Products and Activities

The centers attempt to direct their products and activities toward the research and scholarly community on the one hand, and education policymakers and practitioners on the other. Theoretically, centers provide intellectual leadership for researchers by generating new knowledge and raising new questions. Through such activities as sponsored research forums and conferences, presentations at professional meetings, and publishing research findings in professional journals, the centers are to foster communication on important topics among members of the research community.

Centers are also expected to target products and activities to policymakers and practicing educators. They are expected to develop productive working relationships with teachers, administrators, policymakers, and school board members, and to be responsive to requests for information from such individuals. Finally, they are to create products and activities for these audiences based on the research they support. This usually includes the development of training seminars, publication of guides and manuals, and provision of advice to education and government officials.

Impact on the Education Community

Assessing the impact of center work is even more difficult than measuring laboratory impact, and for some of the same reasons. As with the laboratories, the immense size and decentralized nature of the education system hamper centers' ability to alter classroom practices.

Tracing impact is also difficult because center efforts tend to focus on the "academic reporting" of their work. Center work may be discussed in the ivied halls of a local university, yet be virtually unseen in a nearby elementary school. And, unfortunately, it may take years for such information to be "translated" into forms usable by practitioners. As center work is interpreted, it commingles with work of other scholars, analysts, and research organizations. When a product or teaching strategy finally turns up in a classroom, it may be difficult to recognize that it was based on center-sponsored research.

We are again left overly dependent on anecdotal evidence of center impact and on lists of center products, activities, or accomplishments. We are told, for example, that in the last 3 years staff at the Center for Policy Research in Education (Rutgers University) have discussed aspects of their work with some 5,000 practitioners and policymakers. We also know that in 1984-85, the Reading Research and Education Center (University of Illinois) collaborated with the Center for the Study of Learning (University of Pittsburgh) to help the National Academy of Education's Commission on Reading produce Becoming a Nation of Readers, a book on teaching reading, over 200,000 copies of which are currently in circulation. And we know that the National Center for Research to Improve Postsecondary Teaching and Learning (University of Michigan) has prepared three videotapes on using computers in postsecondary classrooms, and that one of these has already been distributed to 555 chemistry and 685 foreign language departments in various postsecondary institutions across the country. As impressive as these figures are, they do not tell us how -- or whether -- education is improving as a result of center activity.

Recent OERI Management of Centers

In the last few years, OERI has taken a number of steps to ensure better management of the Centers. First, due in large part to changes worked into the 1985 competition (and similar provisions in centers launched since that time), more of the work of the centers is now deliberately oriented toward the near-term improvement of education, and many more of the centers' activities focus on spreading their messages to those who can best use the findings of the research. We do not mean to imply that all is well with regard to dissemination of center findings, but we do see some promising trends.

Second, we are developing more systematic procedures within OERI's Office of Research (OR) to monitor centers' work. Every three months each center is asked to submit a performance report. This document maps center activities against promised milestones and thus helps OERI identify project problems in a timely manner. Each center also submits to OERI a yearly prospectus that presents its proposed projects. In addition, each center must submit a yearly application for continuation, which contains a more detailed description of any new projects the center is proposing. These applications are reviewed by outside experts and by OERI staff. If a project is new, the majority of the reviewers are non-federal experts charged with ensuring that the application is technically sound.

Third, to assure evenhanded, consistent monitoring of centers, the Office of Research is preparing a handbook for "center monitors," the OR staff members who are liaisons with the centers. This document -- to be released in draft form this month -- will describe what is expected of center monitors, will provide examples of the types of products that center monitors must prepare, and will provide examples of possible problems the center monitor might encounter. We are convinced that in addition to providing an important element of institutional memory, this handbook will also aid induction of new center monitors, and will lead to a clearer and more consistent understanding of the role of center monitors.

OERI Plans for the 1990 Center Competition

Planning for the 1990 center competition will begin this year as part of OERI's internal program plans for preparing our FY 1990 budget request. During FY 1988, each of the divisions in the Office of Research will prepare Issue Papers that identify education research needs; these papers will be based on information gained through the six regional forums on research issues held during 1987 and through various conferences OR has held in the past year or so with a variety of audiences. Second, several papers will be commissioned that will serve as part of the foundation for the 1990 competition. These papers will be used to guide the 1990 center competition, as well as be published so that they may be used to inform education researchers nationwide. Third, in late 1988, OERI will assemble a panel of education research experts to react to the commissioned papers and prepare a summary report on the overall issues, opportunities, and technical concerns that relate to the conduct of institutional research. The report of the panel will be distributed widely. The Secretary will publish the final list of center mission priorities in the Federal Register in October, 1989. Applicants will have seven months, until the end of May, 1990, to submit new center applications. The awards are scheduled to be made in November, 1990. (See attachment G for a tentative timetable on the recompetition.)

Productivity in Education Research
The Cases of the Laboratories and Centers

OERI and its predecessor agencies have channelled almost $600 million in federal funds to the laboratories and centers. It is surely reasonable to review the taxpayer's investment in these entities and how their existence affects federal research and development efforts. I would like briefly to offer my own appraisal of the yield from this investment, and I will use as a springboard for my comments several interrelated questions about our experience with these institutions: To what extent does OERI have a properly balanced "portfolio" in its spending on educational research? To what extent are we getting a good return on our investments? And have we missed research, development, and dissemination opportunities over the years by focusing so single-mindedly on laboratories and centers?

From an organization-wide perspective, OERI has a gross imbalance in its spending on educational research and development. This is by no means new. The Federal government has a long history of weak support for education research and dissemination outside the laboratory and center frameworks. But the distribution of OERI's research and development funds has worsened such that, as I indicated earlier, in fiscal year 1988 the laboratories and centers together consume 94% of the part of our budget not devoted to Statistics, NAEP, and ERIC. Precious little remains for non-laboratory and non-center work.

The President's fiscal year 1988 education research and statistics budget request sought partial redress of this balance. The Administration requested $1 million for field initiated studies, $300,000 to support research fellowships, and $3.8 million to enable OERI staff to study State education reform, produce research syntheses on early childhood learning, school counseling, and middle schools, and create useful publications for parents, practitioners, and policymakers. But Congress rejected much of this request. As a result, we had to halve funds for field initiated studies, eliminate the research fellows program, and eliminate or severely curtail many of the synthesis/publication activities planned by OERI staff. Thus, Congress has allowed the imbalance to continue, and even grow, through another fiscal year (see attachment H for charts of OERI's fiscal year 1988 funding and for OERI's funding history).

Our FY 1989 budget again attempts to swing the pendulum toward a balance. We have again requested $1 million for field initiated studies and $4.4 million for tracking reform, OERI research and synthesis projects, and the fellowship program. But even these sums represent only a small portion of what OERI spends on laboratories and centers. In no way can our budget be said to represent the best balance in our research and development spending.

This maldistribution of spending has several deleterious effects. First, OERI must all but ignore individual researchers who do not work within the context of a laboratory or center. Who can guess the number of ingenious ideas that over time have been overlooked as we have lavished funds on laboratories and centers, ideas that, if refined, might have substantially improved education practice? Second, focusing funds on the laboratories and centers has meant that other entities, such as professional associations or loosely organized groups of scholars, have been all but shut out of federal funding. Third, we are limited in the number of education problems we can examine at any given time to those under consideration by laboratories and centers. Potentially important projects have been slighted because of the unbalanced distribution of funding. And fourth, OERI, which has many capable staff members, is profoundly restricted in its own activities. Though intramural work consumes less than 5 percent of our budget, we consider it to be vital to OERI's mission as an information provider.

It is worth noting that many other federal agencies direct much larger portions of their research budgets to individual researchers. The National Science Foundation, for example, devotes fully 88 percent of its research money to individuals in universities and elsewhere. Two other agencies, the Department of Energy and the National Institutes of Health, devote 71 percent and 73 percent, respectively, of their research funds to individual scholars. None of these agencies spend more than 16 percent of research funds on entities analagous to our research centers. And each of them uses mechanisms dissimilar to our laboratories for dissemination. It is clear to us that other agencies consider funding for individuals to be vital for having a balanced research effort.

The laboratories, in particular, have not been a very remunerative investment per se. This is not to say that they do nothing useful--they and their energetic Washington lobbyists are quite capable of finding hundreds of laboratory customers who will claim satisfaction with services provided by the laboratories. But I am saying that, given their present activities and configurations, and given the current fiscal constraints on the government, the laboratories represent a profligate use of OERI funds in relation to the benefit they generate.

This is so for several reasons. I have already mentioned that laboratory impact is amorphous and difficult to assess, and that these institutions simply cannot provide services to more than a few districts in our immense education system. But congressional protection of the laboratories and, to be blunt, the insatiable appetite of the laboratories for federal funds, have shielded them from any real competition from other forms of dissemination and technical assistance. As a result, they have become entrenched institutions whose primary goal seems to be self-perpetuation.

The creation of the rural education initiative for the laboratories illustrates this situation clearly. During the early 1980s, the laboratories were largely unsuccessful in securing significant funding increases from OERI's budget. Then in 1986, they seized upon legitimate congressional interest in rural education as a means to win new federal funding for themselves. Their representatives convinced the appropriations committee to provide $4 million in FY 1987 to the nine regional educational laboratories for rural education projects. That the funds were restricted to laboratories is evidence that the program was little more than pork for them and their representatives. Congress again appropriated $4 million for the rural project in FY 1988 (this figure was later reduced to $3.83 million to meet the deficit-reduction agreement). (See attachment I for further information about the laboratory rural initiative.) Such unnecessary protection of the laboratories violates the principles of open competition and peer review that drive the rest of OERI's research, improvement, and dissemination activities. These principles should drive all of it.

Much has changed on the education research and development landscape in the past 22 years since the first laboratories were created. In 1966 there were few organizations to do the work for which the laboratories were created. Today there are many entities that can do elements of it and that should be given opportunities to show whether they can do it better. I have in mind some associations (e.g., the Council of Chief State School Officers [CCSSO], the Education Commission of the States [ECS], and the National Governors Association [NGA]), some universities, for-profit firms, and even other government-sponsored units (e.g., ERIC Clearinghouses and National Diffusion Network [NDN] State Facilitators), that are quite capable of conducting research and development activities, possibly at less cost and greater productivity than the current laboratories. In fact, if today we conducted a study similar to that which suggested the establishment of the laboratories in the mid-sixties, we would likely conclude that sufficient capacity for research and development already existed and that laboratories would not need to be created.

The picture is not quite so bleak with regard to the centers; in my view, we are getting a somewhat better return on the federal investment in these institutions. I repeat: gauging the effectiveness and utility of center work is as awkward as doing so for the laboratories, but the centers by and large do a different kind of work. Indeed, research almost always has less immediate impact than training and service. Some of the centers do little work of conspicuous value. But others are solid and productive. It is unfortunate that we have so few explicit expectations of the centers, which could be more visible and could apply more of their findings to practice if they were pressured to do so.

This is not to suggest that funding centers is problem-free. First, centers reduce competition among research strategies and ideas in any one domain. Instead of having an issue examined from several quite different perspectives, it is examined only through the lens of the research strategy that won the center competition. Second, funding centers reduces the number of domains that receive any attention or federal dollars. If we focus on 15 topics for investigation and funding, even if they are well-chosen topics, we must neglect a host of other topics. Third, researchers not affiliated with a center are sometimes discouraged from inquiry into the mission area of that center. And fourth, centers may promote a "conventional wisdom" about their mission areas. Such accepted ideas tend to discourage innovative thinking in the field.

There is a perennial problem in discussing the role of the laboratories and centers in research and development; namely, the education system itself is always slow to show improvement. This is not entirely the fault of the extant research and development system. Our school system is diverse and ponderous, having about 15,700 school districts, 110,000 schools, 230,000 administrators, and 2.6 million teachers in a total workforce in elementary and secondary education of almost 4.9 million people. Such numbers are indeed daunting. Only limited numbers of these practitioners seek out the latest information about new knowledge or remain professionally "current" with research literature. And many are disinclined to change even when exposed to better teaching or content ideas. But even with such caveats, the present research and development systems have done a lackluster job of disseminating the reliable, timely, and useful findings that now exist. (This is one of the reasons the Education Department has promulgated the "What Works" series, which is our own attempt to get this information into the hands of those who directly influence education.) My point is this: there are important education issues that beg for close and sophisticated examination. New knowledge on these issues will be welcome. Supporting production of such knowledge is indeed a legitimate role for the federal government. But we already know much more than is being applied today, and we must not hesitate to lay some of the blame for this at the feet of the laboratories and centers, and the larger education research and development enterprise of which they are important elements. The fact that American education has not adequately applied what we already know is a bigger problem today than what we do not know.

Laboratories and Centers: What Is to Come?

What should be the response of the Congress to this state of affairs? In my view, you should give the Education Department far greater flexibility over the research and improvement budget, and should also stop shielding certain institutions from true competition. Then we could design a system to distribute research and development funds more effectively among individual scholars, university-based research centers, a variety of research, development, and professional organizations, the States, and the localities. This would be a first step toward redressing the imbalance in our research portfolio.

How might OERI go about allocating resources if given such flexibility? With regard to dissemination and technical assistance activities, we might support suitable entities in each of the 50 states. These might be State education departments; they might be universities (which have considerable experience with agricultural extension); they might be consortia of school systems; associations; teacher groups; or NDN facilitators. Such organizations could use either direct or indirect service strategies and could be directed to serve governors, State legislatures, education agencies, professional associations, and practicing educators. This arrangement would likely have a greater impact than the present system, given the larger number of individuals and organizations involved. It would also correct some of the deficiencies in the present system that are due to the regional basis of the laboratories. A competitive bidding process, open to all different kinds of organizations, would ensure the best use of these limited funds.

If Congress merely chose to allow OERI to modify the current laboratory structure, we would still have several options, each of which would be superior to the present system. The single most beneficial thing Congress could do -- staying within the concept of laboratories -- is to allow a variety of organizations to compete for laboratory contracts. I have already mentioned some associations, such as the CCSSO, ECS, and the NGA, that would have the capacity to provide services now performed by laboratories. But universities, professional organizations, for-profit organizations, and even consortia of school districts may have such capacities as well and ought to be able to compete for laboratory work. The extant laboratories, of course, would continue to bid for contracts. But an open competition would ensure that laboratories do not become entrenched and protected federal dependencies that remain in existence only by virtue of being shielded from competition. Education service providers and professional groups would be more diverse. And the results, I predict, would be superior.

Congress should also give the Department other options for the laboratories. We could then consider, for example, methods for prompting those who utilize laboratory services to pay (at least in part) for such services. This might be done by soliciting yearly payments from state and local education agencies or professional organizations, and maybe charging customers for certain seminars, conferences, or products. Second, OERI could further encourage an entrepeneurial spirit among the laboratories. Some of the laboratories are now aggressive in seeking non-OERI funding, but others are not. As long as laboratories adequately fulfill their OERI-commissioned work, there is no reason why they should not be able to provide broader services with private or state funding.

Given greater flexibility over research center funds, OERI would likely use these funds in a more varied manner than at present. First, we would have different models for centers. It is not prudent to have all centers of similar size and duration. Some might be large and others smaller, which would allow us to bring the advantages of centers to bear on a greater number of education problems. In fact, we are already moving in this direction with the "mini-centers." Second, OERI would devote more funds to field initiated research, and thus involve a larger number of individuals in our research efforts. Third, we would allow capable entities other than universities, such as think-tanks like the Brookings Institution or the American Enterprise Institute, to sponsor centers. Fourth, we would have competitions for research grants and contracts that are neither centers nor field-initiated studies. Simply put, there would be more chances for us to state topics for research, then have them examined from various viewpoints, in various ways. There is now a huge opportunity for research that conforms to neither of the Congressionally mandated forms, i.e., centers and field initiated studies. Given the ferment, change, and openmindedness in education today, it is a shame that the research enterprise the federal government runs cannot be in ferment as well!

Conclusion

We have learned much about teaching and learning from education research. Indeed, the success of the What Works series demonstrates that the public has an appetite for intelligible forms of this knowledge. We will no doubt learn more from education research, too.

But the federally sponsored education research enterprise today remains very weak. It is not offering a suitable return on our investment, nor does it impact enough on the world of practice. It does not respond quickly to problems. It is not as openminded, fresh, or as ambitious as the education reform movement, which is driving current efforts at school improvement. Nor is this enterprise open to enough different perspectives, disciplines, backgrounds, philosophies, modes of inquiry, and unconventional paradigms and ideas. All in all, the federal research apparatus seems to me disappointing, not worth bearing forward into the future without being overhauled (see attachment J for a discussion of "What Ails Education Research").

The administration has been diligent in improving the management of laboratories and centers as currently configured. But such efforts will be of little benefit to the Nation's school children without some of the changes I have suggested.

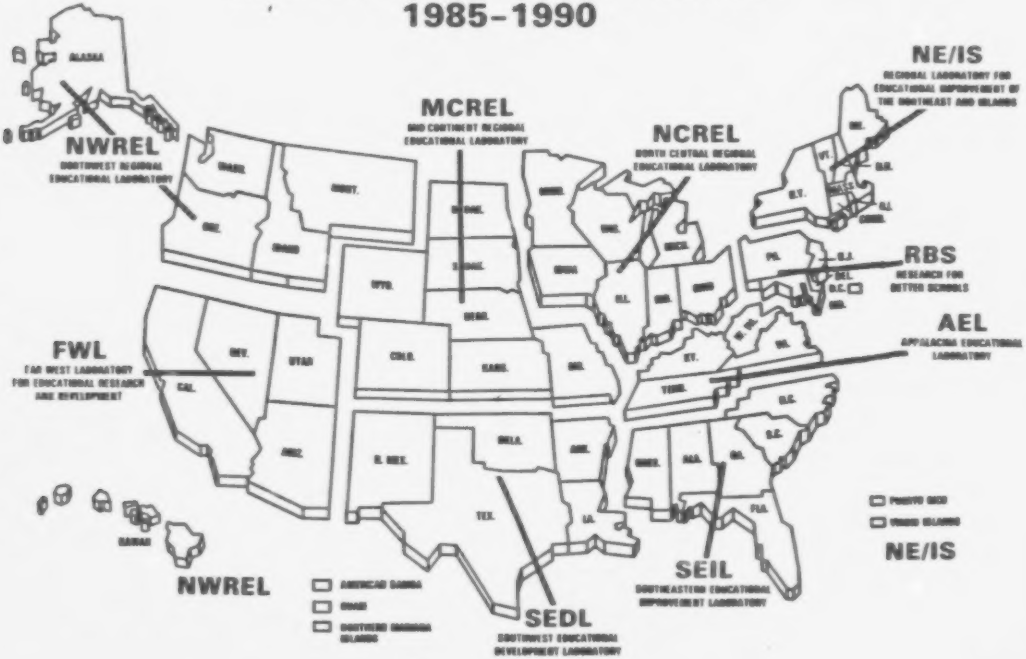
ATTACHMENT A

ATTACHMENTS

Attachment A:	Maps of current laboratories and of pre-1985 laboratories; List of current laboratories
Attachment B:	Summarized history of regional educational laboratories and national education research and development centers, including lists of pre-1985 institutions
Attachment C:	List of regional educational laboratory "tasks" and examples of each
Attachment D:	Laboratory Review Panel Report
Attachment E:	Timetable for fiscal year 1990 competition of regional educational laboratories (subject to revision)
Attachment F:	List of current national education research and development centers
Attachment G:	Timetable for fiscal year 1990 competition of national education research and development centers (subject to revision)
Attachment H:	Charts: Fiscal year 1988 OERI budget; OERI funding history
Attachment I:	Laboratory rural education initiative, fiscal year 1988
Attachment J:	"What Ails Education Research"

U.S. DEPARTMENT OF EDUCATION
OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT

EDUCATIONAL LABORATORIES
1985-1990


NE/IS
REGIONAL LABORATORY FOR EDUCATIONAL IMPROVEMENT OF THE NORTHEAST AND ISLANDS
MCREL
MID CONTINENT REGIONAL EDUCATIONAL LABORATORY
NCREL
NORTH CENTRAL REGIONAL EDUCATIONAL LABORATORY
NWREL
NORTHWEST REGIONAL EDUCATIONAL LABORATORY
RBS
RESEARCH FOR BETTER SCHOOLS
AEL
APPALACHIA EDUCATIONAL LABORATORY
FWL
FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
SEIL
SOUTHEASTERN EDUCATIONAL IMPROVEMENT LABORATORY
SEDL
SOUTHWEST EDUCATIONAL DEVELOPMENT LABORATORY
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CONN.
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HAWAII
NWREL
AMERICAN SAMOA
GUAM
NORTHERN MARIANA ISLANDS
PUERTO RICO
VIRGIN ISLANDS
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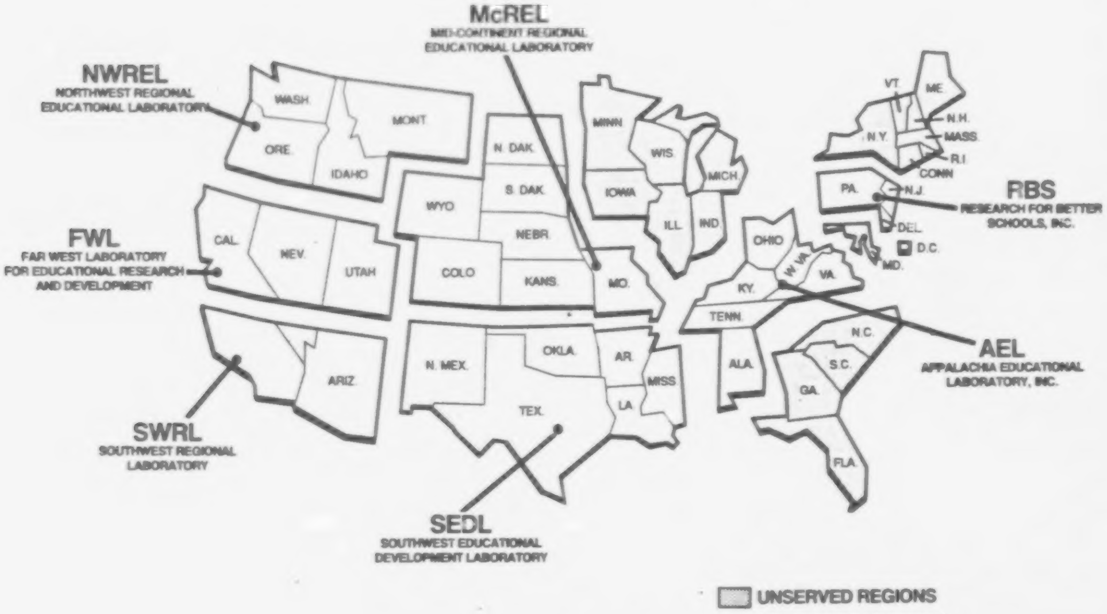
U.S. DEPARTMENT OF EDUCATION
OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT

EDUCATIONAL LABORATORIES
1983-84


McREL
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NWREL
NORTHWEST REGIONAL EDUCATIONAL LABORATORY
FWL
FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
SWRL
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KY.
OHIO
W. VA.
VA.
N.C.
S.C.
GA.
FLA.
PA.
N.Y.
VT.
ME.
N.H.
MASS.
R.I.
CONN.
N.J.
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MD.
D.C.
▨ UNSERVED REGIONS

(Please see footnotes on next page.)

FOOTNOTES TO MAP OF EDUCATIONAL LABORATORIES , 1983-84

The map displays the laboratory boundaries just prior to their reconfiguration for the 1984-85 recompetition.

- Alaska, Hawaii, American Samoa and Guam were served by the Northwest Regional Educational Laboratory during this period.

-The following states were receiving partial services on an interim basis from McREL or AEL : Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Ohio, Tennessee and Wisconsin.

-The New England states and New York received dissemination services only through the Northeast Regional Exchange (NEREX), which was affiliated with the laboratory program.

Maryland received dissemination services only through the regional exchange operated by RBS. The four Southeastern states which are shaded received partial services through the Southeastern Regional Council for Educational Improvement. The Council, which served 13 states in total, focused on supporting the chief state school officers in their policymaking responsibilities.

Regional Educational Laboratories:

OERI funds nine regional laboratories which carry out applied research, development, and technical assistance for educators, parents, and decisionmakers in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, and the Pacific Basin Region. Each laboratory serves a geographic region and is governed by an independent board of directors.

Laboratories plan programs through an ongoing assessment of regional needs, a knowledge of the current trends in research and practice, and interaction with the many other agencies and institutions that assist communities and schools with educational improvement. Improving schools and classrooms is the goal of the laboratories, a goal they carry out through a common set of five tasks or functions:

- Working with other regional organizations to apply research and improve schools. Partner organizations include State departments of education, intermediate school districts and intradistrict collaboratives, universities, colleges, and State associations of educators and parents.
- Assisting State-level policymakers on the implications of educational research and practice for policies and programs.
- Conducting applied research and developing materials, programs, and publications that support the mission of school and classroom improvement.
- Collaborating with other laboratories, research centers, and national associations to extend and enhance related research and development.
- Developing effective internal management, governance, planning, and self-evaluation, as well as reviewing regional needs and developments.

Appalachia Educational Laboratory, Inc. (AEL)

1031 Quarrier Street
P.O. Box 1348
Charleston, West Virginia 25325
(304) 347-0400

Board President: Henry Marockie
Executive Director: Terry L. Eidell
Deputy Executive Director: Jack Sanders

States Served: Kentucky, Tennessee, Virginia, and West Virginia.

Far West Laboratory for Educational Research and Development (FWL)

1855 Folsom Street
San Francisco, California 94103
(415) 565-3000/3125/3115

Board President: Gerald J. Dadey
Executive Director: Dean H. Nafziger
Director of Regional Programs: Robert M. Peterson

States Served: Arizona, California, Nevada, and Utah.

Mid-Continent Regional Educational Laboratory (McREL)

Denver Office

12500 East Iliff, Suite 201
Aurora, Colorado 80014
(303) 337-0990

Kansas City Office

4709 Belleview Avenue
Kansas City, Missouri 64112
(816) 756-2401

Board Chairman: John Prasch
Executive Director: Larry Hutchins (Denver Office)
Principal Investigator: Toni Haas (Denver Office)

States Served: Colorado, Kansas, Nebraska, Missouri, Wyoming, North Dakota, and South Dakota.

Research for Better Schools (RBS)

444 North Third Street
Philadelphia, Pennsylvania 19123
(215) 574-9300

Board President: Fred E. Means
Executive Director: John E. Hopkins
Associate Director: John A. Connolly

Areas Served: Delaware, District of Columbia, Maryland, Pennsylvania, and New Jersey.

Southeastern Educational Improvement Laboratory (SEIL)

P.O. Box 12746
200 Park Offices, Suite 204
Research Triangle Park, North Carolina 27709-2746
(919) 549-8216

Board President: Richard A. Boyd
Executive Director: Charles J. Law, Jr.
Deputy Executive Director: Peirce Hammond

States Served: Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina.

Southwest Educational Development Laboratory (SEDL)

211 East Seventh Street
Austin, Texas 78701
(512) 476-6861

Board President: Jodie Mahony
Executive Director: Preston C. Kronkosky
Director of Institutional Communication and Development: David A. Wilson
Co-Directors, OERI Program: Martha Smith
David L. Williams, Jr.

States Served: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

North Central Regional Educational Laboratory (NCREL)

295 Emroy Avenue
Elmhurst, Illinois 60126
(312) 941-7677

Board President: Ted Sanders
Executive Director: Jane Arends
Director, Office of Regional Programs: David Lidstrom
Director, Office of R&D Resources: Judson Hixson
Director, Institutional Collaboration & Development: Beau Jones Davis
Director, Rural Education: Larry Friedman

States Served: Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin.

Northwest Regional Educational Laboratory (NWREL)

101 S.W. Main Street, Suite 500
Portland, Oregon 97204
(503) 275-9500

Board President: Barney C. Parker
Executive Director: Robert R. Rath
Associate Director: Ethel Simon-McWilliams

Areas Served: Alaska, Idaho, Montana, Oregon, Washington, American Samoa, Guam, Hawaii, and the Northern Mariana Islands.

Regional Laboratory for Educational Improvement of the Northeast and Islands

290 South Main Street
Andover, Massachusetts 01810
(617) 470-0098

Board Chair: Margaretta Edwards
Executive Director: David P. Crandall

Areas Served: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, Puerto Rico, and the Virgin Islands.

ATTACHMENT B

April 15, 1988

Brief History of Regional Educational Laboratories and Research and Development Centers

The Office of Educational Research and Improvement (OERI) supports a network of regional education laboratories and research and development centers. The primary difference between a laboratory and a center is one of purpose. The central purpose of a laboratory is to determine and help meet educational research and development needs in a specific region of the country. The central purpose of a center is to provide national research leadership in a specified educational problem area of national importance.

USOE Creates Educational Laboratories and Centers in Mid-1960's

Federal support of institutionally- based educational R&D has gone through several transformations during the past three decades. Until the mid-sixties, the funding of individual short-term projects was the prevalent mode. The U.S. Office of Education (U.S.O.E.) concluded, however, that this practice was leading to fragmented, inconclusive and noncumulative results, and that the gap between research and practice was not being closed. Little organized means existed to help schools apply research knowledge to curricula, instructional approaches, or organizational designs for education, and the institutional capacity for long-term, programmatic educational research and development was extremely limited.

In response to this problem, U.S.O.E. established regional laboratories and research and development centers to increase the nation's institutional capacity for responding to significant education problems on a national and regional basis. This institutional strategy was an effective antidote to many of the problems of project-by-project funding. However, U.S.O.E. soon found its ability to control the direction of these new institutions and its flexibility to support a wider range of R&D efforts was limited by the large-scale, long-term, and noncompetitive commitments it had made to these organizations. Beginning in 1968, ending of Federal funding to some labs and centers occurred. This was motivated chiefly by a desire to focus funds on the strongest of the institutions. In FY 1972, U.S.O.E. transferred the laboratories and centers to the newly created National Institute of Education (NIE), and NIE attempted to solve the problem through a policy of "program purchase".

NIE Pursues Program Purchase Policy

Under the program purchase policy, NIE funded lab and center work on a program-by-program basis. This policy gave the Institute greater control and funding flexibility, but it also created problems of its own. In effect, it represented a return to the previous practice of funding individual projects, which weakened the stability of the institutions, and contracting for unrelated activities, which fragmented the institutions' R&D efforts. Centers lost the cumulative impact of their activities, the laboratories began to operate as "job shops" (i.e., as consulting firms for hire) with weakened ties to their regions, and Federal priorities began to be favored over local and regional ones.

The laboratories and centers objected strongly to the program purchase policy, and a major controversy ensued. Working through the Council for Educational Development and Research (CEDaR) these institutions became a powerful lobbying group, and they pressed Congress to enact legislation to protect their institutional status. In 1975, the National Council on Educational Research (NCER) responded to this issue by passing a resolution which called on the Institute to strengthen high quality research and development institutions across the nation. To implement this policy the NCER called for NIE to establish "special institutional relationships," which would allow the existing laboratories and centers to develop long-range plans for programmatically integrated work that would replace the short-term unrelated projects they were conducting under the program purchase policy.

As a result of the controversy over the program purchase policy, Congress also intervened in 1976 by passing Section 405(f) of the General Education Provisions Act (GEPA). This legislation mandated that NIE must fund laboratories and centers, and that it must support them on the basis of long range plans that they would develop themselves. Proposals for assistance under Section 405(f) of GEPA were to be solicited from laboratories and centers by the NIE Director. These proposals were to be developed by the laboratories and centers in consultation with the Director, and they were to include each institution's long-range plans for research and development. Support for the proposals was to be based on the Director's determination that the proposed activities would be consistent with the educational research, development, and dissemination activities conducted by the Institute.

Congressionally Mandated Panel Calls for Institutional Support

In Section 405(f) of GEPA Congress also mandated that NIE establish a "Panel for the Review of Laboratory and Center Operations." The Panel was to be composed of 10 to 20 members appointed by the Director from written nominations made by the laboratories and centers and by professional associations and other organizations engaged in educational R&D.

The Panel's report, Research & Development Centers and Regional Educational Laboratories: Strengthening and Stabilizing a National Resource, was delivered in January of 1979. The panel acknowledged that in 1979 there was a far greater variety of performers of institutionally-based educational R&D than existed fifteen years earlier when the laboratories and centers were created, but in response to its Congressional mandate, it focused its report on NIE's relationships with the existing 17 labs and centers.

The Panel's report and recommendations on labs and centers converged with NIE's final efforts to implement the NCER policy on special institutional relationships, and these two efforts culminated in a January 15, 1979, statement of NIE's administrative policy for long-range agreements with the existing laboratories and centers. The policy contained two provisions which governed NIE's lab and center relationships from 1979 until the recompetition in 1984-1985.

(1) NIE's laboratory and center support was to be based on long-term agreements (5 years), which would ensure the stability needed to recruit high quality staff and conduct long-range projects.

(2) These agreements would be based on the identification of a mission and a long-range plan which would provide a general framework for the work of each laboratory and each center. Detailed scopes-of-work for specific projects were to be developed within these missions as the plans unfolded over the course of the five years. Each institution was to establish a strong external advisory board and was given primary responsibility for designing the specific proposals for work within its mission.

Within the implementation of the long-term policy the Institute believed it had solved the problems of program fragmentation and instability that had weakened institutionally-based educational R&D during the mid-seventies under the program purchase policy. Although more than $30 million, or a third of its FY 1979 budget, was committed to noncompetitive awards for laboratories and centers under the new policy, it was thought that the remainder of the Institute's budget would be adequate to support competitive awards for the rest of the nation's R&D community, and that long-run increases in appropriations would make it possible for NIE to fund an even broader range of competitive research and development activities in the future.

Institutional Commitments Erode NIE's Discretionary Budget

However, the Institute experienced a 35% appropriations decline between FY 1980 and FY 1982. Budget rescissions in FY 1980 and FY 1981, and a 25% appropriations reduction in FY 1982, brought NIE's budget down from $82 million in FY 1980 to $53.2 million in FY 1982. Since lab and center funding remained constant during this period under the provisions of their long-term agreements, NIE faced a situation in which noncompetitive funding for these 17 organizations rose to almost 60% of the Institute's budget. Since the remaining 40% was committed to other contractors and grantees through previous awards, NIE faced the possibility that there would be no funds available for new competitive awards to the rest of the nation's R&D community.

As a result of this appropriations decline, the Institute was confronted with the same set of problems U.S.O.E. had encountered in the early seventies. Reductions in appropriations, in conjunction with large scale long-term commitments, limited the Institute's discretionary funding flexibility and seriously jeopardized its ability to meet its Congressional mandate to build a strong educational research and development system. This circumstance persisted up through the reorganization which merged NIE with OERI in FY 1985.

1985 Marks the First Recompetition of the Labs and Centers Since their Origin

In a report on the Omnibus Reconciliation Act of 1981, Congress directed that the laboratories and centers, "...shall upon completion of existing contracts, receive future funding in accordance with government-wide competitive bidding procedures and in accordance with principles of peer review involving scholars and State and local educators to ensure the quality and relevance of the work proposed."

In response to this directive, NIE began planning for a nation-wide competition for laboratories and centers in the winter of 1982-83. The recompetition was successfully completed in 1985.

This was the first competition for laboratory and center funding since these institutions were established in 1966. The competitions were characterized by extensive internal planning, widespread external consultation, early award of planning grants to encourage the participation of non-incumbents, and a two-tiered external peer review of proposals.

Competition Results in New Five-Year Awards

Nine laboratories received awards as a result of the recompetition. Three of the awards were made to new institutions and six awards went to incumbents. (An award was made for a new lab in the North Central Region in 1984. The other eight lab awards were made in 1985. The earlier award in the North Central Region was made as a result of the closing of an earlier lab which had previously served part of that region due to management difficulties.)

Also as a result of the competition, ten five-year grants were awarded to operate R&D centers that would address themes determined by OERI. Five center awards went to non-incumbents. Three awards were made to incumbent centers to address themes that had not been part of their previous missions. Two awards were made to incumbent centers to continue work on their existing missions.

Congress Provides Further Direction Regarding Recompetition of Laboratories

In a further move to require periodic competition within the laboratory program, the Higher Education Amendments of 1986 amended Section 405 of the General Education Provisions Act (GEPA) to read "The Secretary may not enter into a contract for the purpose of regional educational laboratories... for a period in excess of five years (Section 405(f)(2)).

At this time, OERI is beginning a wide-ranging planning process to determine the best ways to have the laboratory function benefit American education. The planning process will include evaluation of critical aspects of the program as it is now structured, analyses of needs to support educational reform and school improvement during the next decade and consideration of alternative ways in which laboratory-type services might be made available to educators.

A wide range of citizen, educator and policymaking groups will be consulted in the course of this planning. Decisionmaking regarding intended future directions for the program will begin in 1989. Pursuant to the intent of the 1981 and 1986 Congressional actions cited previously, new contracts or grants will be procured on a competitive basis. These actions will occur in 1990.

Termination of Core Federal Funding for Laboratories Between 1969-85

Core Federal funding for 14 laboratories was terminated between 1969 and 1985. Historically, "core" funding has meant support for institutional functions (such as governance), in some cases facilities, and central programs. While labs have sometimes obtained other funds, the "core" funds were those which enabled them to be established and maintain their separate existence.

The 14 labs for which core funding was terminated were a subset of the original 20 laboratories which had been started in 1966. (Six of the original labs, plus three newer ones, comprise the laboratory network in 1988.) The fourteen previously-funded labs, and the final year of funding for each, are shown in Table 1 (next page).

Twelve of the fourteen terminations occurred between 1968 and 1973. Significant factors in the pressures for closing these labs were constraints upon funds for educational R&D, lack of support for the laboratories in Congress and the Bureau of the Budget, and also in the educational communities. Closings were based on external reviews that found some labs much less promising than others, and some work that wasn't promising at all.

The rationale for the earliest closings (9) was to concentrate the limited funds allocated for labs and centers in the strongest of those institutions so they would have sufficient resources to realize their potential. External consultants who advised on these initial closings focused heavily on institutional qualities as well as productivity of the work being performed. Advice was given by Frank Chase, who had been commissioned by HEW Secretary Gardner and Commissioner of Education Howe, and by the National Advisory Committee on Educational Laboratories, a select group appointed by the Department.

Closing of three labs in 1972-73 corresponded with preparations to transfer the labs and centers to NIE under a new "program purchase" policy that was to put funding for individual lab activities on a more competitive basis with other agency activities. An elaborate external evaluation was conducted under the guidance of Michael Scriven, then at U.C. Berkeley. This review focused on the quality of each individual program activity that each laboratory proposed to conduct. The agency "bought" only the strongest activities, and closed labs that had none.

Funding for McREL, one of the present laboratories, was phased out in 1974-75 on the basis of a 1972-73 review. McREL, however, stayed alive on its own, and after strengthening, started receiving Federal funds again in 1978.

The last two cases, of CEMREL in 1983 and SWRL in 1985, involved other circumstances. CEMREL was closed on the basis of an Inspector General's report which confirmed, at least in part, highly publicized allegations of mismanagement at the lab, which its governing board had failed to remedy when urged to do so. SWRL, in the 1985 recompetition of labs, was obliged to compete with another incumbent lab within a newly defined region. (The new regions had been created by OERI to redress imbalances, gaps and overlaps in laboratory service areas.) SWRL's competitor won and was funded as the laboratory for the new region. But SWRL is still in business, using the same name (Southwest Regional Laboratory for Educational Research and Development), although without OERI funding. SWRL is in fact proof that a laboratory can survive without such funding.

TABLE 1

The Fourteen Previously-Funded Labs and Their Final Year of Funding

Laboratory	Last Year of Funding					
	FY'69	FY'70	FY'72	FY'73	FY'83	FY'85
Center for Urban Education -New York, NY				x		
Central Atlantic Regional Educational Laboratory, DC	x					
Central Midwestern Regional Educational Laboratory-St. Ann, MO					x	
Cooperative Educational Research Laboratory, Inc.-Northfield, IL	x					
Eastern Regional Institute for Education-Syracuse, NY			x			
Education Development Center, Inc.-Newton, MA		x				
Michigan-Ohio Regional Educational Laboratory-Detroit, MI	x					
Regional Educational Laboratory for the Carolinas and Virginia-Durham, NC		x				
Rocky Mountain Educational Laboratory-Denver, CO	x					
South Central Region Educational Laboratory-Little Rock, AR	x					
Southeastern Educational Laboratory-Atlanta, GA		x				
Southwestern Cooperative Educational Laboratory-Albuquerque, NM				x		
Southwest Regional Laboratory for Educational Research and Development-Inglewood, CA						x
Upper Midwest Regional Educational Laboratory-Minneapolis, MN		x				

R&D Centers - FYs 1973-1985

1. Center for Educational Policy and Management (CEPM), University of Oregon, Eugene

   Management and governance of schools and consequences for student outcomes; educational administration; school organization.

2. Center for Social Organization of Schools, Johns Johns Hopkins University, Baltimore, Maryland

   Relations between variations in social organization and the outcomes of students; school desegregation.

3. Center for the Study of Evaluation, UCLA

   Measurement and methodology; questions in producing tests or educational measures for assessing instructional progress.

4. Learning Research and Development (LRDC), University of Pittsburgh

   Basic research on the psychology of learning and educational practice; basic knowledge and learning skills in language, mathematics and science; individualized instruction and motivation.

5. National Center for Higher Education Management (NCHEMS), Boulder, Colorado

   Planning and financing, productivity; information for management, equity and dissemination; training and technical assistance.

6. National Center for Research in Vocational Education, Ohio State University

   Educational problems related to career planning; career choices, effectiveness of training programs, what are transferable skills?

7. Wisconsin Research and Development Center, University of Wisconsin, Madison

    A comprehensive approach to schooling/individualized instruction in mathematics, reading and language--tutoring, learning in small groups, different learning styles.

8. Center for Educational Research at Stanford, Stanford, California

    (Between 1978-1985, the name of Center was "Institute for Finance and Governance")

    Research on teacher education (N.L. Gage); school finance and governance and productivity.

9. Research and Development Center for Teacher Education, University of Texas, Austin

    Research on teaching; how research information is used to improve teaching; "learner-teacher and context variables;" teacher education.

ATTACHMENT C

SAMPLES OF SPECIFIC ACTIVITIES UNDER THE FIVE LAB TASKS

Task 1 (governance, management, planning and evaluation)

-Each of the labs conducts continuing self assessments; reports are submitted to the regional boards and OERI.

-Regional board meetings and other functions are supported under this task.

Task 2 (work with and through existing organizations to improve schools and classrooms):

-RBS supports the Mid-Atlantic Metropolitan Council (MAMC). The council is made up of the five largest school districts in its region (Baltimore, Newark, Philadelphia, Pittsburgh and Washington, D.C.) Superintendents participate significantly in the council. It is sponsoring a special study of student commitment to secondary schooling in the member districts and a new "thinking skills" project, as well as providing a continuing forum for the district leaders to meet together.

-The Far West Lab is providing assistance to the statewide Nevada School Improvement Project, including on-site assistance to building principals in three districts, workshops, evaluating pilot efforts, developing resource materials and assisting with long range planning for implementation of the program.

Task 3 (work with state-level decisionmakers on school improvement issues):

-The Mid-Continent Lab (McREL) has helped the state of North Dakota develop a strategic planning system for its educational program. Several state education departments, boards, professional associations, plus the State Legislative Council and the Governor's office have been involved.

Task 4 (create research and development-based resources for school improvement:

-AEL has distributed 22,400 copies of The Link throughout its region in the past year. The publication provides highlights of recent findings and developments in educational R&D. Other labs provide similar publications.

-The Southwest Educational Development Lab has produced a publication Dimensions of Educational Leadership, which summarizes current thinking about leadership in effective schools.

Task 5 (work in collaboration with centers and other laboratories on regional and national educational problems):

-The Far West Lab is studying school interventions for at-risk youth in conjunction with the Center for the Study of Secondary Schools at the University of Wisconsin. Extensive data collection and analysis in two Oakland, California schools is being conducted.

ATTACHMENT D

URC
UNIVERSITY
RESEARCH
CORPORATION

October 5, 1987

Dr. Chester E. Finn, Jr.
Assistant Secretary and
Counselor to the Secretary
U.S. Department of Education
400 Maryland Avenue, S.W.
Washington, D.C. 20202

Dear Checker:

The report of the Laboratory Review Panel on the review of Regional Educational Labs is forwarded to you.

The Panel is pleased to have had the opportunity to comment on the review. As noted in the report, we believe the review was conducted very competently, and that the results will be beneficial to the labs and to OERI.

We have focused, for the most part, on program-wide issues in our report. We have utilized the opportunity to draw upon all of the reports on individual labs to help identify issues for your consideration.

You will see, however, that we have some specific recommendations and observations regarding three individual labs. In our judgement, these matters warrant special attention. We hope you will consider these recommendations, as well as the others, and advise us at an appropriate time of any actions taken with respect to these matters.

I would be pleased to speak with you to discuss this report, as would Joy Frechtling and Garry McDaniels, other Panel members who are in this area.

The Panel plans to meet three times per year hereafter on a regular basis. Our agenda from here forward will concentrate on monitoring the results of the review, discussion of forthcoming evaluation activities, and providing input to policy regarding the future of the program.

If you have suggestions about how the Panel may be of further assistance to you, please let me know.

Sincerely,

Christopher T. Cross
Chairman
Laboratory Review Panel

CTC/ab

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REPORT OF THE LABORATORY REVIEW PANEL
ON THE 1987 REVIEW OF LABORATORIES

October 6, 1987

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Membership of the Panel

Mr. Christopher T. Cross (Chairman), President, University Research Corporation, Chevy Chase, Maryland

Dr. Joy Frechtling, Director, Division of Instructional Evaluation and Testing, Montgomery County, Maryland, Public Schools

Dr. Ernest House, Professor, Laboratory for Policy Studies, University of Colorado

Dr. Alexander Law, Director, Program Evaluation and Research Division, California State Department of Education

Dr. Garry McDaniels, President, Softwriters Development Corporation, Baltimore, Maryland

Dr. Carl Sewall, President, Educative Systems Development Corporation, Plainfield, New Jersey

REPORT OF THE LABORATORY REVIEW PANEL
ON THE 1987 EXTERNAL REVIEW OF LABORATORIES

I. Observations About the Review Process -

In the summer of 1987, OERI conducted an external peer review of the nine regional educational labs. The purpose of the review was to evaluate lab performance during the first 18-20 months of their contracts and also to evaluate their plans for the remaining three years of the contracts.

A team of external reviewers, accompanied by the cognizant OERI institutional liaison (IL), visited each lab for two and one-half days. The teams had beep trained in Washington for two days prior to the on-site visits. The teams read the labs' 3-5 year plans and other documents necessary for their work. Standardized evaluation criteria had been developed for review of both lab performance and plans.

While on-site, the teams met with lab board members, management and staff. The teams also contacted selected lab clients and constituents by telephone to determine their perceptions of the labs' performance. The review was conducted within relatively short timelines and with relatively limited resources.

The panel has compiled information about the review from several sources: (a) reports from review teams and OERI institutional liaisons (IL's); (b) meetings with the review team leaders, IL's and lab executive directors; (c) written comments from the executive directors concerning their reviews; (d) visits to a lab by most panel members while a site visit was in progress; and (e) review of lab 3-5 year plans and needs assessments. In addition, the panel chair briefly observed the review teams' training and spoke to the reviewers.

Before proceeding with detailed comments on the review, the panel has some preliminary observations to make about its overall nature and findings. The OERI design generated much factual information about specific aspects of lab performance and plans. Reviewers absorbed a great deal of written and oral information about the labs and their reports are very factual.

The review generated relatively little information about external considerations in the labs' environments. For example, while information is available about constituents' and clients' perceptions of the labs, there is not documented evidence about labs' effects in the regions. Nor did the review address such a question as: "Is this the optimal arrangement of service improvement organizations in the regions?" OERI staff did not see the review as capable of addressing such broader issues. It plans to address such issues in other parts of its lab evaluation plan. The panel concurs with the OERI position in this regard.

Detailed comments on the review process follow.

The review was exceptionally well organized and implemented. In particular:

- The reviewers were broadly representative of lab constituent groups. They were selected as a result of a wide search process which included requests for nominations from a larger number of professional organizations and other sources. The reviewers therefore brought a fresh view to the evaluation of labs. The panel regards this outreach positively.

- OERI spent considerable time and effort in preparing and training the reviewers. These preparations apparently provided teams with a common understanding of the purposes and criteria for the review. Room for appropriate discretion was nonetheless left for review teams regarding the details of individual reviews. Reviewers were motivated and industrious while on-site.

- The reviewers were sensitive to the issues faced in the labs. Their backgrounds provided them with relevant perspectives with which to do their job.

- Communication from OERI to the labs about the review was good. Information about procedures, criteria and schedules was communicated to the labs in advance. This apparently facilitated understanding and acceptance of the review by the labs.

- The labs were very open to the review process. They responded to questions and provided information freely and, in general, treated the review as a learning opportunity.

- The OERI institutional liaisons (IL's) played a key role in the review. They provided historical and Departmental perspectives about the labs which would otherwise not have been available to the panel. They also provided an additional source of information on numerous key issues. This information helped the panel "triangulate" data sources and perspectives in its work.

With hindsight, some things might be done differently. We recommend the following changes in any future reviews:

- Reviewers be given exemplars of critical characteristics of "good labs" against which to make comparisons.

- Each team should review more than one lab. The teams in this review did not have such cross-cutting assignments or membership. This prevented reviewers from having more than one basis for making judgments about lab performance and plans. In general, the panel believes there is a tendency for reviews of this type to produce positive results. Institutions being reviewed find it helpful to have a person to talk with, explain one's programs, etc. This does not mean the results from this review are to be disbelieved, but the tendency for positive findings to result from such a process should be kept in mind.

- The panel received relatively little information about the quality or impact of lab products. The panel recommends further information about this topic be developed in the future. If not done through such a review, it should be done through other means.

- Consideration should be given to paying reviewers. In this case, the teams did a tremendous amount of work, even going beyond the number of days they nominally agreed to serve. However, some of them had reservations about non-payment and it is unlikely that many of them would volunteer to perform the same service on an unpaid basis again. This would impair OERI's ability to obtain consistency in review teams over time. (Further, non-payment would have been a severe barrier in this case to any attempt by OERI to have teams review more than one lab.)

Taking into account all the observations and caveats above, the panel considers this review exemplary and credible in light of the time and resources available.

II. Observations About the 3-5 Year Plans

The panel wishes to frame its observations about lab plans drawn from this review on a program-wide basis. It believes that such a perspective can best complement the laboratory-specific orientation of the external review teams.

The panel does not believe it has sufficient information to qualify review team's findings about individual laboratories' performance. It believes more information about lab impact from the field is desirable. The panel will say, however, that it has no evidence of gross discrepancies between labs' stated commitments and performance to date.

This section will therefore comment on program-wide issues and considerations which have been raised through the panel's discussions of and participation in the review. The panel believes these are generally unresolved matters and warrant the Assistant Secretary's attention.

The panel thinks regards the present level of effort being expended by OERI and the developing nature of its relationships with the labs postively. The panel is not under any illusions that the relationships are trouble-free. But it believes (particularly its members who are knowledgeable about prior administrative arrangements within NIE/OERI) that the assignment of individual OERI staff for major parts of their time as institutional liaisons, together with focused OERI management attention to the program, is praiseworthy.

Incorporation in the program of the indirect services strategy (working with and through intermediaries) is a significant development in the labs' history. The strategy has affected the kind of work the labs conduct. It also has implications for the appropriate way to evaluate labs' work. The panel does not believe the full implications of this strategy are understood as yet. More detailed comments on this topic are found below.

Unresolved Issues and Considerations

The 3-5 year plans developed by the labs leave questions for the panel about the overall clarity and vision of the labs' missions- On average, the lab 3-5 year plans and accompanying needs assessments were about 400 pages per institution. This often made it difficult for the panel to get a clear picture of what a lab is doing. Stylistically, executive summaries of the plans might help. Alternatively, the entire plans could simply be written more succinctly.

In particular, the panel frequently found it hard to get a clear idea of what overall sense of mission drove the lab plans. For example, whether a lab sought to better enable its constituencies to handle change on their own, to "gap fill" with needed services, or to act as a disseminator of information within its region (or some combination of these) was not always clear. Ironically, the extensive amount of verbiage in the plans did not help with this problem.

The panel believes one by-product of such lack of clarity is that it is difficult to set reasonable expectations for lab performance. As a corollary observation, the panel believes the labs' self assessments may be relatively stronger in assessing specific activity-level performance and weaker in assessing program-wide or institutional performance, especially impact.

There is an additional observation by the review teams which the panel believes may be related to its perception of lack of clarity and vision in the labs' missions and their role in the school improvement process. That observation was sometimes ambiguous internal guidelines in use by labs for determining when to offer or refuse services to constituents when requested, and when to stop services once started. Lack of a larger vision of a laboratory's mission may in part lead to uncertainty in this area of programmatic decision-making.

The way in which labs set priorities is not always clear- The panel notes that extensive needs assessments have been done to help guide the lab 3-5 year plans. The level of effort expended and amounts of data obtained in this area are high. But the panel frequently did not see the relationships between needs assessment data and the choice of programs or strategies made by the labs.

In part, the difficulty in establishing such relationships lay with the complexity of the labs documentation, discussed above. In part, the difficulty lay with the complicated nature of the needs assessment data themselves. The data would in many cases support numerous strategies and programs, more in fact, than the lab could ever hope to respond to. In such cases, the reasons underlying the actual choices made about whom to serve were not always clear.

Stated differently, the panel believes there may be patterns of service allocation to different populations and areas of their regions made by the labs which can not be predicted by the needs assessment data and which may not reflect any other stated premises. The panel recommends more succinct information be presented in the future regarding reasons for adoption of lab strategies and allocation of services.

In a similar vein, some plans contain commendable statements of regional context considerations, in part, we understand, in response to OERI requests. But it is not always clear that the actual choice of programs undertaken by a lab has any direct relationship to the context considerations described. One lab, for example, noted the severe economic considerations in its region, but its programs did not deal directly with finance issues, or how schools in its region might deal with budgetary crises. Greater synergy between contextual considerations outlined in the plans and the plans themselves is desirable.

The implications of the indirect service ("with and through") strategies need further examination- The panel vigorously sought information about how indirect service strategies are working in the labs. These strategies are clearly a major aspect of the labs' programming. The panel believes the labs have established networks where they did not exist before as a result of the strategies. It also believes the labs serve clients through existing networks as well. But the impact of indirect service strategies is felt not only with respect to work performed specifically under Task Two of the contracts (where the provision ir contained), but also with regard to how a lab perceives of itself as an institution. In the latter regard, some labs have experienced a profound shift of identity and purpose from being a developer and provider of R&D to that of a linking agency, working primarily with and through other educational service agencies.

The following specific aspects of the indirect service strategies are highlighted for consideration.

- There needs to be a better understanding of the range of partners with whom labs might work and which choices are most efficacious.

- Indirect service strategies have different implications in different type regions (e.g., for the Far West Lab's, where there are many intermediaries and the Appalachia Lab's, where there are relatively few).

- The lab RFP states acceptable conditions under which labs may work directly at the local level. In general, these guidelines appear to have been followed. In most cases, for example, labs do not appear to define building level personnel as a primary type of client. There are individual cases, however, where a lab is working directly at the local level in which it is not clear that it has a mandate to do so. Some clarification of these guidelines as they relate to the 3-5 year plans may be desirable.

- The strategies may subject labs to uncontrollable influences. For example, the Governor of California recently cancelled a program of technical assistance centers with which the Far West Laboratory was working as part of its indirect services. This development has required reprogramming by the lab.

- The 1985 recompetition resulted in a transition of labs from institutions which conducted some significant R&D on their own, to ones providing assistance services, primarily in partnerships with others. While the change has clear benefits, one cost is the loss of practitioner-oriented R&D that labs used to conduct. In part, this transition makes the choice of the R&D that labs incorporate in their services more critical. Based on knowledge presently available to it, the panel is not sure that there is a sufficient locus of practitioner-oriented research emanating from other sources which the labs may draw upon.

- As indicated earlier, the panel believes more information about lab impact is desirable. But while the ultimate goal of labs is school and classroom improvement, it isn't clear that looking for such outcomes is the appropriate criterion for a lab using indirect service strategies, except in given situations where there is a discernible linkage between services delivered by the lab and the ultimate school beneficiaries. Such situations are probably the exception rather than the rule. Further attention to this issue is warranted.

Are the labs to be pro-active or reactive within their regions? The panel perceives an issue which appears to be unresolved regarding the labs' role in their regions: the degree to which they are to be pro-active in identifying areas for involvement and taking leadership in those areas, and the degree to which they should be "constituent-driven".

This issue reflects facets of the other issues which have preceded it in this section of the report, i.e., whether the labs have an overall vision of their mission, whether their needs assessments are adequate and their programs related to them, and the implications of the indirect service strategies for the institutions. But new considerations are raised as well.

On the one hand, when a lab has a clear sense of constituent needs and follows them, it will presumably play a useful role in its region. But its programs may be changing and unrecognizable from one year to the next. On the other hand, if a lab stakes out leadership in an area, it risks both political backlash and changing priorities which may render its capabilities and agenda obsolete.

In this regard, the panel notes that some labs have identified areas in which they are particularly strong. That is good; however, a team in one case has reported that the lab had a tendency to diagnose or interpret client problems in terms of a school improvement area in which it had particular expertise and then frame its services in that area.

As indicated, the pro-active/reactive issue is but one aspect of others raised here, perhaps most strongly, that of what is the larger vision labs have of their mission. The panel believes the labs must strike a balance between being pro-active and reactive. It is not sure such a balance is understood or has been achieved among the labs.

To what degree should regional labs also have some national identity? The panel has inquired about the extent to which labs perceive themselves as being oriented entirely to their regions, or whether they have, or should have, some national identity or outlook as well.

The panel's perception is that the labs are very strongly oriented to their regions. This is a strength. On the other hand, there are some legitimate roles outside the region which labs might become involved with.

Appropriate national visibility and orientation can be achieved through national recruitment and staffing of labs' key positions. Participation in appropriate national professional activities is also appropriate. Laboratories do these things. One important national role might be to exert leadership in one or more areas of school improvement. This might be done through original collaborative arrangements with parties outside, as well as within, the labs' regions. Collaboration will be discussed below.

One aspect of the labs' role which the panel finds troubling is an apparent lack of concerted effort by either OERI or the institutions to develop a general plan for fostering collaboration with other R&D resources funded by the Department of Education. The panel has identified numerous assistance activities funded by the Department, with whom the labs might collaborate. These are shown on Table 1 (following page).

The panel believes more collaboration can be achieved between labs and other Departmentally-funded resources and strongly urges that appropriate action be taken to bring about such collaboration.

Collaboration among labs - The panel questions whether the intended degree and benefits of collaboration among the labs are being achieved. The 1985 RFP stipulated that labs should "work in collaboration with centers and with other labs on regional and national educational problems". Laboratories are to allocate ten percent of their budgets to collaboration under Task Five to participate in activities that "address more than one region or are nationwide in scope". Specific Task Five activities may include:

a) exchange of information on R&D needs and practices through meetings, newsletters or electronic networks;

b) development of resources for improvement, e.g., syntheses, training modules, workshop designs;

c) engagement in collaborative improvement efforts across regions;

d) assisting OERI in understanding needs of educational practitioners in regions and nationwide;

Table 1

OTHER ASSISTANCE RESOURCES FUNDED BY THE U.S. DEPARTMENT OF EDUCATION WITH WHOM REGIONAL LABORATORIES MIGHT COLLABORATE

Office/Activity	Funding ($ in millions)
Educational Research and Improvement (OERI)	
Educational Research Centers (18)	17.8
ERIC Clearinghouses (16)	4.8
National Diffusion Network (NDN) State Facilitators (53)	4.8
Leadership in Educational Administration Development (LEAD) Program Centers (51)	7.1
Elementary and Secondary Education (OESE)	
Chapter 1 Technical Assistance Centers (4)	3.6
Indian Education- Regional Resource Centers (5)	2.2
Drug Free Schools Centers (5)	8.8
Special Education and Rehabilitative Services (OSERS)	
Regional Resource Centers (5)	2.2
Bilingual Education and Minority Language Affairs (OBEMLA)	
Multi-Functional Resource Centers (16)	10.0
Evaluation Assistance Centers (2)	0.7
Bilingual Education Clearinghouse	1.0

Table 1 (continued)

OTHER ASSISTANCE RESOURCES FUNDED BY THE U.S. DEPARTMENT OF EDUCATION WITH WHOM REGIONAL LABORATORIES MIGHT COLLABORATE

Civil Rights (OCR)	
Desegregation Assistance Centers (10)	8.2
Vocational and Adult Education (OVAE)	
National Center for Research on Vocational Education (NCRVE)	6.0
Community Coordination Centers (6)	0.8
Total Funding	78.0

The regional offices of the Department (Secretary's Regional Representatives) are also resources with whom the labs might work.

e) cooperating in work in national research, development, dissemination and improvement problems jointly identified by the lab and OERI.

A central coordinating group was described in the RFP that would be convened by OERI in consultation with the labs. It would determine guidelines, procedures and priorities and would involve assignments to cross-laboratory task forces for planning and implementation. An annual meeting of lab governing board chairs, executive directors and OERI was also envisioned.

Nine "theme areas" emerged from lab plans in FY '86. Three of these were administrative in nature, including electronic networking and evaluation. The electronic networking has occurred as envisioned and some effective collaboration on substantive themes, e.g., higher order thinking skills, the urban education network, state policy and rural education. Collaboration in other areas, however, has lagged and except for two of the above areas, content-based products have not been developed as yet.

OERI staff have reported several difficulties with Task Five implementation to date. One concerns laboratory leadership for specific themes. There is a lack of balance and consistency among labs in taking leadership for themes. Some labs have taken the lead in more than one area and at least one has not taken the lead in any. Lead labs cannot force other labs to cooperate and lead lab leadership is very fragile; it sometimes does not emerge and is usually highly person-dependent.

It has been difficult to identify the overall dimensions of Task Five because the work in the labs often overlaps that in other tasks.

OERI staff have made the following recommendations regarding the implementation of Task Five:

1) The notion of the "lead lab" should be re-evaluated in cooperation with the labs. The number of "lead" areas per lab may need to be limited.

2) A more equitable distribution of work among labs be determined in collaboration with them.

3) OERI should take a more active and collaborative role in implementing Task Five activities, ideally by having each member of the OERI Laboratory team serve as a liason/facilitator for a theme area.

4) The institutional liaisons would have responsibility for generating collaborative efforts across OERI and the Department.

5) Products developed under Task Five should be disseminated nationally through a variety of educational agencies.

6) Meetings among OERI staff and lab staff should continue as necessary to reach these objectives.

The panel endorses the general intent of these recommendations. It suggests that, in addition, further thought be given to the incentives, or lack thereof, for labs to participate in Task Five as presently implemented. The panel also believes that the responsibility for success of Task Five is shared by OERI and the labs. While the labs need to live up to the spirit of the contract requirements, OERI will need to take strong central leadership if the potential in this area is to be realized.

Public and private education- With one exception, the team reports did not highlight the degree of services being provided to private education. The panel does not have enough information in this area of the program to comment knowledgeably.

The panel believes that service to private schools is of greater significance in some regions than others and that the interests of individual labs in it should be guided by their regional characteristics and governing boards. (Private school officials are among various types of educators the 1985 RFP recommended for consideration in board membership.) The panel also believes the labs should be sensitive to the needs of intermediary organizations (i.e., through indirect service strategies) serving private education. Among these these organizations are those serving specific populations, such as the Association of Tribal-Controlled Schools.

Regulation of the Labs- The panel is interested in the efficiency and productivity of the organizational and contractual relationships between the labs and OERI. Among the topics in which it is specifically interested are the following:

- The degree of specificity in the lab contracts. The panel believes that the specificity of contracts emphasizes process at the expense of (1) a concept of overall lab role (2) substantive emphasis (3) vision of successful service and (4) indicators of success.

- The panel believes the degree of reporting required by OERI may be excessive. But given that, it is still possible, as suggested in the discussion of clarity and vision of the labs' mission, the labs write too much in response to the OERI requirements. A greater balance in reporting requirements between the need for detailed accountability and programmatic clarity needs to be sought.

- The panel believes there is an inherent conflict between the greater degree of control and specificity appropriately demanded in contracts and the autonomy lodged in the concept of regional labs. The panel is aware of the previous discussions about this subject. It believes that the potential for use of cooperative agreements in the future in the program is worthy of investigation. But for the moment, the panel would have to conclude that the ideal procurement mechanism for use in the program does not exist.

Relationship Between OERI and non-OERI activities- The panel is aware that labs differ greatly in the extent to which they have non-OERI funding. The implications of this deserve attention. These include:

- Laboratories differ greatly in their entrepreneurial behavior as regards non-OERI funding. Some of the more mature ones have sizable proportions and amounts of such funding. On the one hand, this reflects organizational health and vitality. The panel is concerned, however, that such labs may be shifting valued staff and other resources as necessary to compete for and conduct such services at the expense of the OERI-funded work.

- The panel is concerned that OERI may, unintentionally, be subsidizing labs to compete with other organizations for other OERI and non-OERI work. Labs may be afforded an advantage in competitions because of their relatively better-developed institutional capacity and accumulated abilility to tap other resources. The panel recognizes that the OERI contracts do not have that purpose and it is not OERI's intent to afford labs unfair advantage when competing for funds. Some means to ensure that this is not the case, however, or other resolution of this matter, may nonetheless be appropriate.

- The panel is aware that newer labs without other sources of funding or cash reserves face unique needs regarding their cash flow. The panel believes that OERI should be responsive to such needs.

Organizational maturity- An issue somewhat related to that of OERI and non-OERI activities is that of organizational maturity. The labs vary widely on this dimension. The older ones have been in existence for some twenty years, the newer ones for two to three years. The following considerations, therefore, are worthy of attention regarding the labs' varying organizational maturity.

- The panel believes the older labs might productively assist the younger ones on a selective basis in either governance, organization and managment, or programmatic areas. OERI staff have cited examples of how such intra-lab assistance has occurred. This is praiseworthy. The panel believes, however, that such assistance might be extended. Older labs might particularly take the lead in collaboration under Task Five.

- With all labs, but perhaps the older ones in particular, there is a need to obtain staff to deal with new and unfolding educational areas (e.g., higher order thinking skills), or retrain existing staff to deal with them. The panel recognizes the need for stability in personnel administration of a lab and for some continuity in staffing. On the other hand, stability and continuity will not always meet challenges in new areas. The panel has heard a concern that labs may be entering into fields where they do not have adequate staff expertise, nor plans to acquire that expertise. The panel recommends that the labs' capacity to adapt staffing to meet changes required in their mission and clients' needs be examined. Specific factors to be examined include policies for providing new staff, as required, and providing staff development for existing staff. Staff development can and should be a vital part of each laboratory's overall personnel program.

Lab-specific matters- The panel will depart here from its focus on program-wide matters to comment on a few matters related to individual labs. The labs referred to are the newer ones. These comments are made in part because they relate to the specific labs and in part because they exemplify the sorts of issues which may face new institutions generally. They are thus relevant to the 1990 recompetition.

The reports on the North Central Regional Educational Laboratory reflect many strengths in the institution. They also reflect struggles the lab has gone through to achieve stability. These include marginally adequate faciltities (which are now being substantially renovated), turnover in management and cash flow problems related to Departmental payment procedures. (The lab did, however, have financial reserves available to it from a predecessor organization which prevented dire consequences from occurring due to the cash flow problems).

The present executive director of the lab asserts that the turnover in management has not adversely affected it. Whatever the case in that regard, the panel believes that for a newer institution with such a history, OERI should continue to monitor the situation carefully. Two rather different monitoring postures are appropriate. One is to encourage and support appropropriate growth of the lab. The other, however, is to counsel moderation in aspirations, if necessary, so that the lab's programmatic reach does not exceed its organizational and managerial grasp.

The Southeastern Educational Improvement Laboratory has had cash flow problems. These were largely due to its new status as a lab without any existing cash reserves to fall back upon. Difficulties in attaining a satisfactory payment mechanism experienced with the Department's contracts and finance offices have exacerbated the laboratory's cash flow problems during its initial period. The panel is pleased to note that these problems appear near resolution. The panel encourages close attention by OERI management to any similar situations in the future.

The Regional Laboratory for the Northeast and Islands grew out of a pre-existing organization and is implementing a novel structure for providing service. State assistance centers have been established through existing organizations on a decentralized basis as a means to provide a substantial portion of the laboratory's services. The panel has heard arguments for and against the efficacy of this strategy. It has two observations to make in this regard.

The first observation is that the lab is implementing a strategy which was clearly included in its winning proposal in 1985. Any uncertainty, or even unease, with the novel characteristics of this strategy ought not, therefore to be turned into premature judgments about its success. The second observation is that, notwithstanding its contractual validity, enough experience has been gained with the strategy to warrant a special activity to explore its progress and prospects. The panel therefore recommends that the lab be requested to jointly convene such an activity with OERI during the first six months of the new program year. The activity would examine the operation of the strategy to date, reactions to it from the field and possible future directions for it. Representatives of various lab constituents and clients, plus others with the potential to contribute to the discussion, would be invited to participate. The panel would follow the course of this activity closely.

III. Recommendations Regarding the Future of the Program

The panel has a responsibility to make recommendations covering the longer term of the lab program, as well as immediate considerations arising from the external review. A focal point for these longer term considerations is policies relevant to the recompetition of the labs scheduled for 1990 and administration of the program thereafter.

The panel makes the following recommendations at this time. They are stimulated by discussion of this review. They are not, however, necessarily derived from the review in every aspect. The panel members bring broad and diverse perspectives to the task of school improvement and labs. The recommendations below in part reflect those perspectives.

Make the programmatic realities and the contractual requirements compatible-

The panel recognizes the need for OERI, or any funding agency, to be accountable for administration of its contracts. On the other hand, labs are engaged in work which, by definition, is client-driven to a considerable degree and thus changing in nature. The present contract requirements appear to impose an unrealistic degree of precision upon labs in stating in advance what they plan to do, at least for "outyears", or those beyond the current and next ones.

The panel has addressed this issue earlier in this report. It recommends here that further study of desirable procurement procedures for new awards to labs be explored as an integral aspect of planning for the recompetition itself.

Strengthen Departmental program administration-

The panel has not sought to examine the operations of the Department's Grants and Contracts Service (GCS) in support of the labs. It has no reason to believe that Departmental procurement regulations are not being followed in the lab contracts. Nonetheless, it has heard reports of slowness in resolving cash flow problems and slow approval of other lab requests.

Just as the panel has counseled attention by labs to basic matters of management and organization, the panel counsels OERI to take whatever action is possible to strengthen the contract administration of this program. In addition to seeking additional staffing in the relevant GCS unit, OERI might take one additional step. It is to have institutional liaisons (IL's) gain maximum advantage of the powers which are lodged in their designation as the "Contracting Officer's Technical Representative" (COTR). The panel is aware that some Government agencies delegate considerably more discretion to their program officers having that designation than does GCS. The panel strongly believes that appropriate training of IL's in their COTR role is desirable.

The panel also notes that IL's are overburdened with administrative details. Such details are inappropriate for their role as senior staff and also hinder their addressing larger programmatic issues. Designation of junior staff to apprentice two or three IL's is desirable. Apprentices could both assist IL's with their administrative work and prepare to assume IL responsibilties when staff vacancies occur. Such staffing would also ensure that there would be adequate back-up knowledge about a lab and its region in the absence of the IL.

Further examine the fiscal requirements of establishing and operating a lab-

The panel has been struck by the vastly different degree of overall financial resources available to individual labs, particularly some comparisons between older ones and newer ones. Attention should be given to ways that labs' cash flow needs may be met. On the one hand, labs should not be required to endure financial hardship. On the other hand, they should not over-aggresively seek other sources of funds, possibly at the expense of OERI-funded activities or the labs' own sense of self-identity. The panel strongly recommends that consideration be given to including fees in any future contracts. Such fees are a reasonable way to develop reserves to meet unexpected needs and are in fact consistent with the contractual relationship between the department and the labs.

Examine the "entrepreneurial" behavior of the labs-

The panel believes the behavior of labs with large amounts of non-OERI funding is in fact a significant determinant of their overall institutional behavior. The panel recognizes that OERI is only accountable for conduct of work it funds, but it is not possible in every instance to understand performance of OERI-funded work without understanding the broader environment.

The panel recommends that this "entrepreneurial" aspect of labs, specifically how it affects OERI-funded work, be studied prior to the recompetition. Such a study would address patterns of seeking non-OERI-funded work by labs, the amounts and types conducted and the distribution of available resources within a lab between OERI-funded and non-OERI-funded work.

Clarify the paperwork in the program-

The combined requirements for paperwork imposed on the labs by the Department's contracts office and OERI are very large. Still, some labs seem to have gone beyond the bounds of what even OERI required in their submission of documents for this review.

For the recompetition, documentation must be submitted in sufficient detail to allow a valid and reliable review process to be conducted. For program administration, adequate documentation also needs to be submitted. But as indicated earlier, the panel believes the amount of documentation submitted in connection with this review may have actually obscured some larger vision of what the labs are doing. Clearer, more succinct documentation is possible in this program and should be encouraged.

Study the implications of the indirect services ("with and through") strategy-

The panel is impressed with the degree to which the labs have sought to implement this strategy. It has had major affects on the character and programs of many of the institutions.

Still, there are many unanswered questions about the best way to implement this strategy and its implications. Among these questions are the most appropriate groups with whom to work "with and through", the effects of not serving some groups, the degree, if any, to which this strategy should be imbued in all the labs' work and appropriate ways to evaluate labs' performance working in this mode.

A forthcoming field study appears to offer one opportunity to examine at least some of these issues. The strategy and its implications should be studied thoroughly prior to commencing the recompetition.

Re-examine the assumptions underlying needs assessments

The panel is not convinced the extensive needs assessments are adequately serving their intended purpose of guiding programmatic planning within the regions. On the one hand, there is too much data. On the other hand, the data do not always adequately track planning decisions and the allocation of services actually made. The panel recommends that the possibility of shorter needs assessments be explored, also that greater visibility be given to labs' unpublished bases for making decisions.

More coordination is needed-

The panel commends OERI and the labs for the efforts taken to coordinate activities among labs. But much more can and should be done. Within OERI, better coordination of the IL's activities can be accomplished. Better coordination of the lab program with other OERI-funded activities is particularly desirable.

The labs can improve coordination among themselves and with other parties. As indicated earlier in this report, the panel does not believe that the labs are benefiting from such coordination of their activities to the extent they and their clients might.

Further study of this issue is desirable. It should include analysis of the successes and failures of the present coordination provision in the contracts (Task Five), but not be bound by the present contractual provisions. OERI should specifically study the potential for labs to further coordinate their work with the other Federally-funded assistance institutions listed in Table 1.

Study the future of services to the Pacific Basin Region-

The panel is aware that the Northwest Regional Educational Laboratory is providing services to the Pacific Basin Region. This region covers a vast area, ranging from Hawaii in the east to Pacific territories in the west. The area is strategically important, both educationally and otherwise.

The area was designated a separate region in the 1985 recompetition of the laboratories. The Northwest lab was assigned to help the region develop full-service capacity to operate its own lab by the close of this contract period, as well as to provide services to it.

The panel is not in a position to comment on the level or adequacy of services provided to the region by the Northwest lab, or the degree of progress made in preparing the region to have its own lab. Nonetheless, it strongly recommends that OERI study the future direction of lab services to this region prior to commencing the 1990 recompetition.

More examination of the programs in the field is needed-

The panel recommends that in the future, evaluations of whatever sort (monitors' visits, external reviews, studies, etc.), should seek to get more information from the people in the field with whom the labs work and serve. The panel recognizes the fiscal constraints on obtaining such information, i.e. funds for staff travel, reviews and contracted studies. It nonetheless encourages OERI to get as much "grass-roots" evidence as possible to ensure that a clear and concise picture of how well the labs are working is obtained.

ATTACHMENT E

TIMETABLE FOR FY 1990 COMPETITION OF REGIONAL EDUCATIONAL LABORATORIES (subject to revision)

Most of the present lab contracts expire on November 30, 1990. The North Central Lab, having been competed earlier, is an exception. That contract expires November 30, 1989. A decision has yet to be made whether to recompete the North Central Lab in 1989, or extend the contract one year to recompete it on the same schedule as the others.

We envision the following steps in the process.

By the Spring of 1989, we will accumulate as much evaluation information as we can about the labs, for consideration in framing program policies in the recompetition. There is also $75K in the President's 89 budget for a round of consultations, meetings, etc., in the field with lab constituents to obtain their views about desirable program policies.

Drafting of the RFP will start in the summer of 1989. It will be issued late in 1989. Proposals will be due in the spring of 1990. Contractor selection and negotiation will have to occur by the summer of 1990. This will allow time for phase-out of any incumbents who are unsuccessful in the competition.

Money was available for planning grants to enhance the earlier competition, both in the case of the North Central Lab and for the overall competition. That use of funds had a substantial stimulative effect on the number of competitors. Thirty-three planning grants were awarded in the overall competitions. Almost all of the planning participants were involved in one way or another in 17 full proposals for the awards. There was competition in all but one lab region.

With no money available for planning grants this t'me, the prospects for an equally vibrant competition are reduced. Nevertheless, there are important virtues for competition. One is the discipline of the market place, in funneling money to the best possible competitors. The second is that the recompetition provides a unique opportunity to re-examine and change program policies on a comprehensive and compelling (i.e., everyone has to comply with the regulations) basis.

Broadening the eligibility for possible awardees would also have a salutory affect on the recompetition. For example, allowing consortia of school districts to be eligible and in general easing the requirement that labs be self-standing organizations would make it easier for non-incumbents to consider competing.

A preliminary schedule of steps in the procurement process follows. It assumes that the lab and center regs now under review will have been finalized, but that a specific procurement solicitation will have to be written.

March-June 1989.............Evaluative information collected and analyzed; consultations with field completed.

June-September 1989.........Drafting of RFP

July 1989...................Notice of coming procurement placed in Federal Register

September 30, 1989..........RFP issued

March 30, 1990..............RFP closes

July 31, 1990...............Winners announced; negotiations begin

August 1, 1990..............Incumbent labs not selected for new contracts given two months to develop and negotiate close-out and transition plans

October 1, 1990.............Close-out plans implemented

December 1, 1990............New contracts begin

December 30, 1990...........All close-out and transition activities under discontinued awards completed.

The same procurement process would generally hold if the structure of the lab program was changed. Time would be required to gain acceptance of proposed changes, however, and possibly legislative action as well. (For example, the role of regionally-based governing boards was incorporated in the Higher Education Amendments of 1986).

The planning process for the recompetition will provide an opportunity for consideration of some fairly radical alternatives. For example, it has been suggested that the program might be changed to a State-based structure. The suggestion draws heavily from experience with the Leadership in Educational Administration Development Program (LEAD). The idea is to create State-based consortia or organizations designed to increase the use of educational R&D. The governors' office would be expected to take a leadership role in such entities. The purpose would be to involve many constituencies and agencies to gain use of educational R&D, rather than relying primarily on SEA's. Such a change would take legislative action, but we think the ideas is worthy of consideration.

State-based "labs" might also be able to form consortia, either for general or specific purposes. Suth consortia would not have the character of permanent lab regions and boards, etc.

ATTACHMENT F

National Research and Development Centers

The National Research and Development Centers are university-based projects that focus research on topics of national significance to educational policy and practice. Each center works in a defined field on a multi-year (and usually multi-disciplinary) program of research and development. Each center's role is to:

Exercise leadership in its mission area.

Conduct programmatic research and development.

Attract the sustained attention of the best researchers to education problems.

Create a long-term interaction between researchers and educators.

Participate in a network for collaborative exchange in the education community.

Engage in a dissemination program.

Center for Bilingual Research and Second Language Education

University of California
1100 Glendon Avenue, Suite 1740
Los Angeles, California 90024
(213) 825-8886

Director: Amado M. Padilla

Affiliated Institution: Center for Applied Linguistics (CAL)

Mission

This Center is also known as the Center for Language Education and Research (CLEAR). Its mission is to assist in developing a language-competent American society. Its primary goals are to develop the English language competence and academic skills of language minority students and to develop the second/foreign language experience and competence of English-speaking, monolingual students. In pursuit of these goals, CLEAR's staff of social science and education researchers are involved in research, development, and dissemination activities which will improve knowledge, instruction, curriculum and materials in bilingual and foreign language education.

National Center on Education and Employment

Teachers College
Columbia University
Box 174
New York, New York 10027
(212) 678-3091

Director: Sue E. Berryman
Associate Director for Communication: Erwin Flaxman

Affiliated Institutions: The RAND Corporation and City University of New York, Graduate Center.

Mission

The Center's research program seeks to improve the knowledge base for deciding who should teach what work-related skills to whom, when, how, and for what purposes. Toward this objective, it supports research by economists, sociologists, psychologists, and policy analysts. The Center also has an active program to communicate this knowledge to those who can use it, and, in conjunction with policymakers, to explicate and synthesize its implications for work-related education in this country.

Center for Research on Elementary and Middle Schools

Johns Hopkins University
3505 North Charles Street
Baltimore, Maryland 21218
(301) 338-7570

Co-Directors: James McPartland
Edward McDill

Mission

The mission of the Center for Research on Elementary and Middle Schools is to produce useful knowledge about how elementary and middle schools can foster growth in students' learning and development. The work of the Center is designed to produce: (a) better scientific understanding of how elementary and middle schools can foster student learning of academic knowledge and skills and student development of valued personal characteristics such as strong self-concept, civic values, and independence; (b) research-based practical methods for improving the effectiveness of elementary and middle schools; and (c) specific strategies for implementing effective research-based school and classroom practices.

National Center on Effective Secondary Schools

Wisconsin Center for Education Research
University of Wisconsin
1025 West Johnson Street
Madison, Wisconsin 53706
(608) 263-7575

Director: Fred M. Newmann
Associate Director: Gary Wehlage

Mission

The Center seeks to learn how to improve student achievement in secondary schools. Special attention is directed to the needs of disadvantaged and less successful students. Research on improving academic achievement is guided by three central assumptions: (1) since the concept and measurement of achievement are problematic, the mission should not be simply to increase student scores on tests currently in use; (2) to improve academic achievement, we must first understand how to increase student engagement in academic work; and (3) although policies and conditions originating beyond the school have substantial impact on student achievement, more attention must be given to the strategies that teachers and administrators can use to alter conditions in schools to increase students' engagement and achievement.

National Center for Research to Improve Postsecondary Teaching and Learning

School of Education
University of Michigan
Ann Arbor, Michigan 48109-1259
(313) 936-2741

Director: Joan S. Stark
Associate Director: Wilbert J. McKeachie

Mission

The Center focuses research, development, and dissemination activities on college classroom learning and teaching strategies, curricular structure and integration, faculty attitudes and teaching behaviors, organizational practices, and use of emerging information technology. It emphasizes cognitive development of undergraduate students in colleges that concentrate on teaching as their primary mission. This emphasis was chosen because recent research in cognition holds great promise for improving learning and teaching in higher education.

Center for Policy Research in Education

The Eagleton Institute of Politics
Rutgers, The State University of New Jersey
Wood Lawn - Neilson Campus
New Brunswick, New Jersey 08901
(201) 828-3872

Director: Susan Fuhrman

Affiliated Institutions: Stanford University, University of Wisconsin - Madison, and Michigan State University.

Mission

The Center produces research that: (1) is useful to policymakers and their constituents; (2) focuses on the relationships between policy and teaching, learning, school organization, and student performance; (3) strengthens the connections among policy, practice, and performance; (4) provides information about a range of policy approaches to influence education practice; (5) contributes to theory and knowledge about which policies work best under which circumstances; and (6) fosters a continuing and strengthened dialogue between the producers and consumers of research.

Center for Postsecondary Governance and Finance

Executive Office
University of Maryland - College Park
College of Education
6525 Belcrest Road, Suite 430
Hyattsville, Maryland 20782
(301) 454-1568

Executive Director: Richard P. Chait
Associate Director for Research: Frank Schmidtlein
Associate Director for Communication
and Administration: Kathryn Theus
Director of Collaborative Activities: Robert Berdahl

Affiliated Institutions: Arizona State University; Teachers College, Columbia University; and University of Wisconsin - Madison.

Mission

The mission of the Center is to improve the effectiveness, efficiency, and equity of teaching, research, and public service in postsecondary education. This mission is carried out through policy research and dissemination of information designed to improve governance, management, and finance practices. The Center is pursuing the concerns of postsecondary education at the institutional, inter-institutional, State, and Federal levels. This includes: 1) promoting learning through teaching, 2) creating knowledge through research and scholarship, and 3) disseminating knowledge and providing assistance through public service activities.

Center for Research on Evaluation, Standards, and Student Testing

Regents of the University of California
Center for the Study of Evaluation
University of California at Los Angeles
Los Angeles, California 90024
(213) 825-4711

Co-Directors:
Eva Baker (UCLA)
Graduate School of Education
145 Moore Hall, UCLA
Los Angeles, California 90024

Robert Linn (University of Colorado)
School of Education
Campus Box 249
Boulder, Colorado 80309

Affiliated Institutions: University of Chicago; University of Colorado; Educational Testing Service; University of Illinois; National Opinion Research Center; Arizona State University; and the University of California at Santa Barbara.

Mission

The Center's mission is to conduct research and development in the areas of testing and evaluation to assess and improve its impact on education quality.

National Center for Research on Teacher Education

College of Education
Michigan State University
Erickson Hall
East Lansing, Michigan 48824-1034
(517) 355-9302

Director: Mary Kennedy
Associate Directors: Sharon Feiman-Nemser
Robert Floden
G. Williamson McDiarmid

Affiliated Institutions: University of Wisconsin - Madison; Education Matters, Inc., Cambridge, Massachusetts; Teachers College, Columbia University.

Mission

The National Center for Research on Teacher Education seeks to produce useful knowledge to improve the quality of teacher education. The Center views teacher education as one of many influences on teachers and examines the purpose and role of programs relative to these other influences. It asks what impact various approaches or alternatives to teacher education have on teachers and how particular kinds of learning opportunities influence teachers. These questions are examined as they relate to the teaching of two academic subjects: writing and mathematics. To date, there has been more argument than inquiry about these questions, and rarely have the issues been defined in a way that allowed careful investigation. Therefore, the Center's work consists as much of conceptual development as it does of gathering empirical data. The goal is to improve and expand conceptual and empirical studies of teacher education and teacher learning and, in so doing, to help focus debates about teacher education and inform teacher education policy and practice.

Center for the Study of Learning

Learning, Research and Development Center (LRDC)
University of Pittsburgh
3939 O'Hara Street
Pittsburgh, Pennsylvania 15260
(412) 624-4895

Co-Directors: Lauren Resnick, LRDC
Robert Glaser, LRDC
Associate Director: James Voss, Center for the Study of Learning

Mission

The Center seeks to create new knowledge that will be useful in teaching students how to become competent thinkers, learners, and problem solvers. The Center's research focuses on understanding the skills underlying successful thinking and learning in three areas of the school curriculum: mathematics, science, and social studies. The research is directed at children of all ability levels, from the hardest to teach to the most talented.

Center for the Study of Writing

School of Education
University of California, Berkeley
Berkeley, California 94720
(415) 643-7022

Director: Sarah Freedman

Affiliated Institution: Carnegie-Mellon University

Mission

The primary mission of the Center for the Study of Writing is to improve the teaching and learning of writing. Focusing on writing as a means of communication, a skill to be developed, and a way to help students learn across the disciplines, the Center encourages research that places emphasis on learning and on the teacher's interaction with the learner. The Center's major goal is to engage in "practice-sensitive" research that will create "research-sensitive" teachers. Its major objective is to develop workable theories that will increase the number of successful writers as well as stimulate further research.

Educational Technology Center

Harvard Graduate School of Education
337 Gutman Library
6 Appian Way
Cambridge, Massachusetts 02138
(617) 495-9373

Co-Directors: Judah L. Schwartz
Martha Stone Wiske

Affiliated Institutions: Cambridge, Newton, Ware, and Watertown, Massachusetts school systems; Education Collaborative for Greater Boston; Education Development Center; and Educational Testing Service.

Mission

The Center's goal is to find ways of using the computer and other information technologies to teach science, mathematics, and computing more effectively. Research focuses on "targets of difficulty" that were identified by subject matter experts, researchers, and teachers. Mathematics work focuses on word problems, algebra, and geometry. Projects in all three areas use the computer's capacity to provide concrete representation of difficult-to-grasp concepts. Two science projects examine the use of simulations to teach concepts of weight and density, and heat and temperature, while a third science project focuses on teaching the process skills involved in scientific inquiry and the nature of science as an enterprise. Also underway are computer education projects aimed at clarifying students' difficulties in learning to program and at exploring the classroom usefulness of software applications. Two additional projects explore the educational potential of emerging technologies.

Reading Research and Education Center (RREC)

University of Illinois
174 Children's Research Center
51 Gerty Drive
Champaign, Illinois 61820
(217) 333-2552

Co-Directors: Richard C. Anderson
P. David Pearson
Associate Director: Jean Osborn

Sub-Contractor: Bolt, Beranek and Newman, Inc.

Mission

The primary mission of the Center is to conduct research that will help us to become "a nation of readers" through applied and basic research activities in teaching and learning. RREC's aim is to produce knowledge that will benefit practitioners and others. Focusing on higher-order literacy skills and on the reading of content texts, the Center's research program addresses the following:

- o Acquisition of Knowledge and Skills: How can students learn the skills that will enable them to acquire knowledge from textbooks in different academic subjects?
- o Instruction in Reading: How can teachers become more effective in helping students learn to read?
- o Text Structure: How can textbooks be improved to optimize student learning?
- o Testing of Reading Proficiency and Evaluation of Instruction: How can reading proficiency be better measured and how can various instructional approaches be validated?

The Center also has three major institutional activities that are designed to ensure that knowledge about reading becomes infused into practice: (1) improving school textbooks, (2) improving teacher education, and (3) raising the level of literacy about literacy.

Center for Research on the Context of Secondary School Teaching

Stanford University
School of Education
CERAS Building
Stanford, California 94305
(415) 723-4972

Director: Milbrey W. McLaughlin
Associate Director: Joan E. Talbert

Affiliated Institution: Michigan State University

Mission

The "School Context" Center mission is to discover how working conditions and other circumstances in schools affect teachers, promote or hinder effective teaching and, ultimately, affect student outcomes. An important objective of the Center is to provide policymakers and practitioners with information about how school policies and practices, especially those associated with recent reforms, relate to the school context, teachers, and teaching.

Arts Education Research Center

New York University
School of Education, Health,
Nursing, and Arts Professions
32 Washington Place, #31
New York, New York 10003
(212) 998-5050

University of Illinois
at Urbana - Champaign
College of Applied and Fine Arts
105 Davenport House
809 South Wright Street
Champaign, Illinois 61820-6219
(217) 333-2186

Directors: Jerrold E. Ross (New York University)
Theodore Zernich (University of Illinois)

The Arts Education Research Center is jointly funded by the National Endowment for the Arts (NEA) and the Office of Educational Research and Improvement (OERI). The NEA administers and monitors the Center. The Arts Education Research Center has two locations: New York University and the University of Illinois, Urbana - Champaign.

Mission

The New York University (NYU) Arts Education Research Center's mission is to conduct research that uses both qualitative and quantitative methodologies to study the following three areas that have direct impact on the teaching of art and music at the secondary level: (1) the nature of aesthetic response; (2) strategies for teaching; and (3) curriculum development designed to elicit such response. Second year research activities involve teachers in rural and suburban areas. In the third year of research, a third art discipline (dance or literature) will be added to the plan of work. The NYU Arts Center's primary objective is to identify and/or create models of excellence in teaching the arts, demonstrate how and why these models work, and disseminate the results of such research so that the models can be replicated in public and private schools across the nation.

The University of Illinois (UI) Arts Education Research Center is dedicated to developing a deeper understanding of the complex issues surrounding teaching, learning, and evaluation in the arts at the elementary and secondary levels. The principal mission is to provide national leadership in three related areas: (1) conducting research that is germane to schools and schooling and that assesses the acquisition of knowledge and skills in the arts; (2) conducting research related to teaching and learning in the arts in elementary and secondary school settings; and (3) providing leadership for the arts teaching profession by disseminating information and organizing collaborative exchanges.

These institutions coordinate their research agendas and collaborate on research activities and findings. The activities of the Center are overseen by a single National Advisory Panel.

Center for the Learning and Teaching of Elementary Subjects

Michigan State University
College of Education
East Lansing, Michigan 48824
(517) 353-6470

Co-Directors: Jere Brophy
Penelope L. Peterson

Mission

The Center for the Learning and Teaching of Elementary Subjects has prepared a plan to: identify exemplary practices, particularly for teaching and learning problem-solving and higher-order thinking; develop and test hypotheses through school-based research; and make specific recommendations for improvement of school policies, instructional materials, assessment procedures, and teaching practices. The Center focuses on the issues of: (1) what content should be taught, (2) how teachers frame and focus their teaching to best utilize their resources, and (3) in what ways good teaching is subject-matter specific. The Center addresses these issues as they relate to the elementary education subject areas of arts education, literature, math, science, and social studies.

Center for the Learning and Teaching of Literature

State University of New York at Albany
School of Education
1400 Washington Avenue
Albany, New York 12222
(518) 442-5026

Director: Arthur N. Applebee
Co-Directors: Judith Langer
Alan Purves

Mission

The mission of the Center for the Learning and Teaching of Literature is: to provide an intellectual focus for literature research and practice; to conduct research that contributes to the improvement of teaching and learning; and to act as a clearinghouse that promotes good practice in the teaching of literature. The goal of the Center is to explore fundamental issues in the literature curriculum which have potential for improving classroom practice. To achieve this goal, the Center is examining the amounts and types of literature to which students are exposed, the objectives of the literature curricula, and the assessment of student performance. The programmatic research concerns are organized in three broad areas: (1) Current Emphases in Instruction, which examine the major alternatives to current emphases in the curriculum, primarily through systematic study of the content and the organization of literature instruction in unusual programs across the United States and in other nations; (2) Teaching and Learning Processes, which examine the ways in which individual readers approach individual texts and the interactions between classroom approaches and what readers learn to do; and (3) Assessment, which examines the ways in which literature is assessed and the relationships among the different kinds of literary knowledge represented. The research findings will be applicable to grades K-12 in both public and private schools.

Research Synthesis Center for the Teaching, Learning, and Assessment of Science

The Network, Inc.
290 South Main Street
Andover, Massachusetts 01810
(617) 470-1080

Director: Senta Raizen

Affiliated Institution: Biological Sciences Curriculum Study (BSCS)

Mission

The Research Synthesis Center for the Teaching, Learning, and Assessment of Science provides conceptual and practical leadership across areas of major interest in science education, by promoting changes in state and local education agency policies that affect science assessment, curriculum, and instruction. In doing so, the Center is serving as a mechanism to bridge gaps between research and practice in science education by synthesizing what is known from current research and practice. The Center's research agenda is comprised of a series of integrative studies that enable it to: (1) understand the current status of assessment, curriculum, and instruction in science; (2) enhance, link, and integrate current efforts to establish what ought to be the future state of science education; and (3) create products and processes that help science education progress toward its stated goals. The Biological Sciences Curriculum Study (BSCS) assists in carrying out the mission and activities of this Center.

Center for the Learning and Teaching of Mathematics

Wisconsin Center for Education Research
University of Wisconsin at Madison
1025 West Johnson Street
Madison, Wisconsin 53706
(608) 263-4285

Director: Thomas A. Romberg

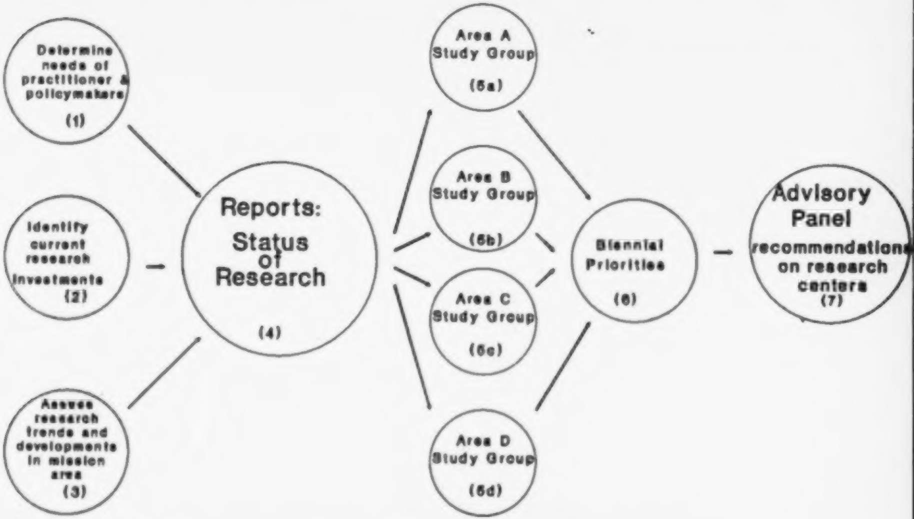
Affiliated Institution: The Mathematical Sciences Education Board, Washington, D.C.

Mission

The Center for the Learning and Teaching of Mathematics has a research program that seeks to provide a research base for the reform movement in school mathematics. The Center has contracted with the Mathematical Sciences Education Board to assist with its research, development, and dissemination activities. The Mathematics Center is addressing effective instructional strategies and processes specific to mathematics content matter, the relationship between mathematics content matter and the curriculum, and, mathematics assessment. The activities focus on two areas: Instruction/Learning and Curriculum/Assessment. The programmatic research design addresses: (1) how to build relationships between research on students' cognition and problem-solving ability and research on instruction in the content specific areas of Early Arithmetic, Algebra, Geometry, and Rational Numbers; and (2) how to build a relationship between current efforts to reform the school mathematics curriculum and the procedures and techniques of assessing student achievement in mathematics as a result of studying the curriculum. The latter relationship examines the nature of the current curriculum reform movement, the state of current practice and the problem of curriculum alignment, and the influence of assessment in the curriculum.

ATTACHMENT G

U.S. Department of Education
Office of Educational Research and Improvement
Office of Research


Determine needs of practitioner & policymakers (1)
Identify current research investments (2)
Assess research trends and developments in mission area (3)
Reports: Status of Research (4)
Area A Study Group (5a)
Area B Study Group (5b)
Area C Study Group (5c)
Area D Study Group (5d)
Biennial Priorities (6)
Advisory Panel recommendation on research centers (7)

PROPOSED CENTER PLANNING PROCESS

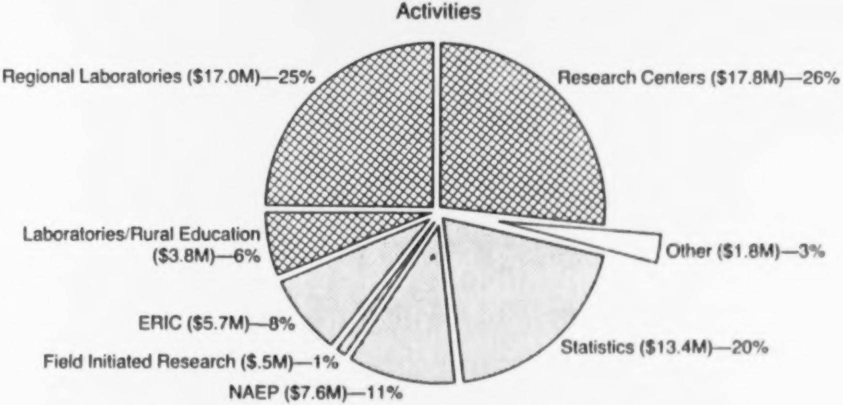
TIMETABLE FOR FY 1990 COMPETITION NATIONAL EDUCATION
RESEARCH AND DEVELOPMENT CENTERS (subject to revision)

DATES	EVENTS
1988	
May	Submit FY1990 budget request to Assistant Sec. (including planning funds for center competition)
June	Identify nominees for study groups
July-Aug	a) Complete commissioned reports. b) Secure study group members.
Sept-Oct	Each division completes reports on status of research. a) FY 1989 Congressional appropriations. b) Study groups meet.
Nov	a) Complete synthesis of study groups' and staff recommendations for mission areas. b) Submit proposed biennial priorities to DORM for clearance.
1989	
Jan	a) Publish proposed priorities-FY 1990 and 1991. b) Submit application package to IMCD for OMB approval.
Feb	Staff submits recommendations on mission and research priorities to advisory panel.
Mar	Convene advisory panel.
Apr	a) Submit recommendations of advisory panel for approval. b) OMB approval of application package.
May	Submit FY 1991 budget request to Assistant Secretary (includes request for institutional awards).
June	a) Develop scopes of work. b) Submit closing date notice(s) to DORM.
July	Submit final biennial priorities to DORM.
Aug	Publish final biennial priorities for FY 1990 and 1991.

Sept	a) Complete application package(s) for printing. b) Announce competition and mailout applications.
Oct	FY1990 Congressional appropriations.
Dec	Hold information and technical assistance session in Wash.,D.C.
1990	
Jan	Select external reviewers.
Feb	a) Complete Technical Review Plan and submit to GCS. b) OMB submits FY1991 budget request to Congress.
Mar	Closing date (around March 14)
Apr	a) OR prepares FY1991 program budget plan, including an estimated 12m for center awards by December 1, 1990. b) Mail applications to external reviewers.
May	External reviewers meet in Wash.,D.C.
June	Staff conducts site visits or prepares clarification questions.
July	External reviewers reconvene in Wash.,D.C.
Aug	Staff completes analysis and prepares recommendations.
Sept	Submit slate to GCS.
Oct	a) FY1991 Congressional appropriations. b) GCS starts negotiation of awards.
Nov	GCS awards grants.
Dec	GCS awards cooperative agreements.

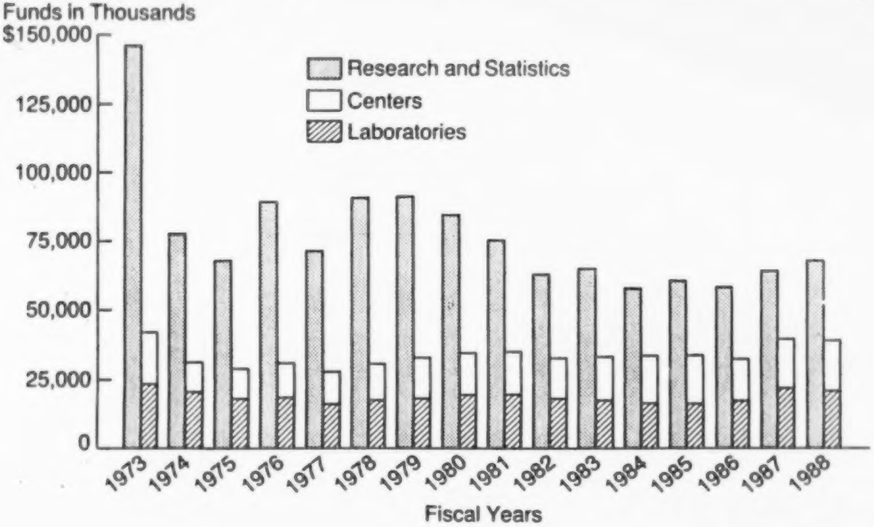
ATTACHMENT H

OERI
FY 88 Research and Statistics Appropriation
(Total $67.5 Million)

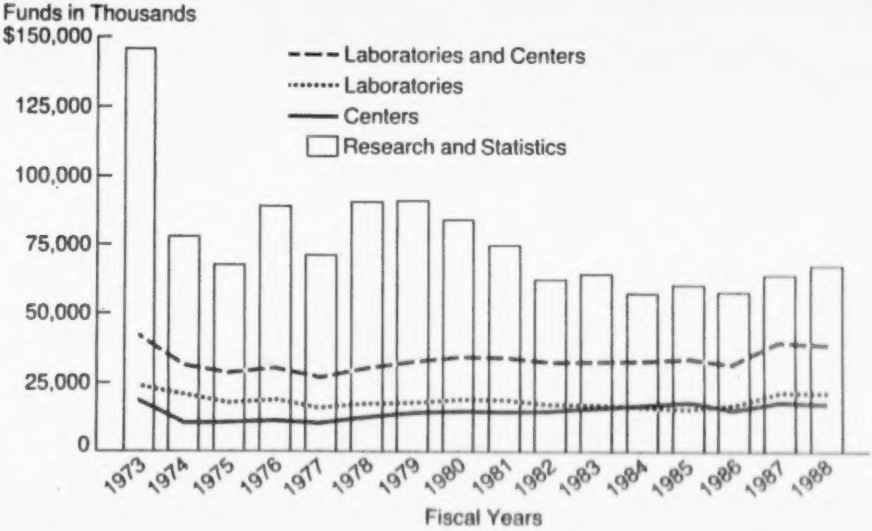


Shaded areas of the Activities Pie Chart are FY 88 congressionally mandated activities.

Office of Educational Research and Improvement Funding History FY 1973 – FY 1988

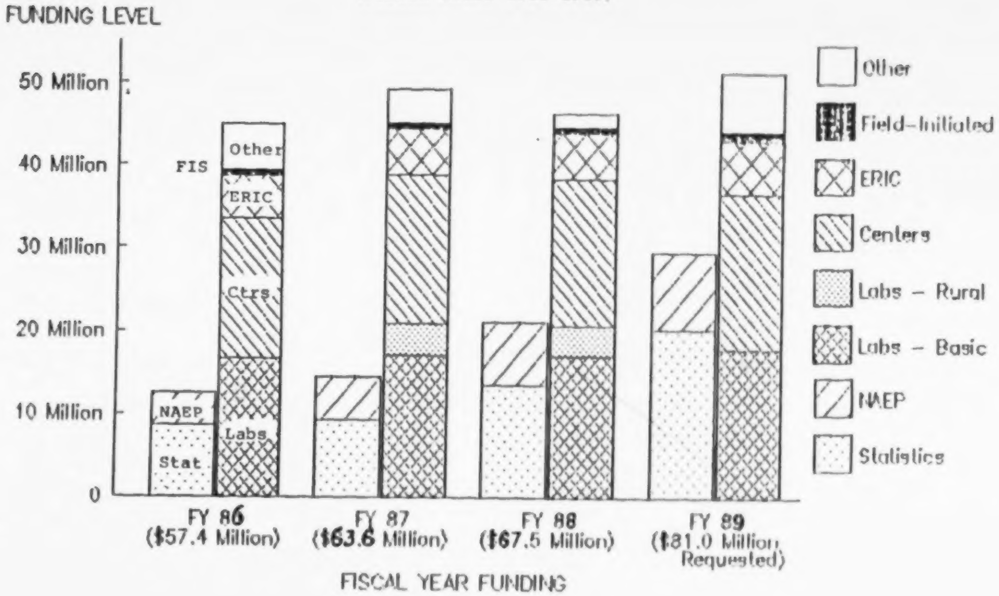


Office of Educational Research and Improvement Funding History FY 1973 – FY 1988



RECENT FUNDING HISTORY
OERI - RESEARCH AND STATISTICS

(Fiscal Years 1986-1989)

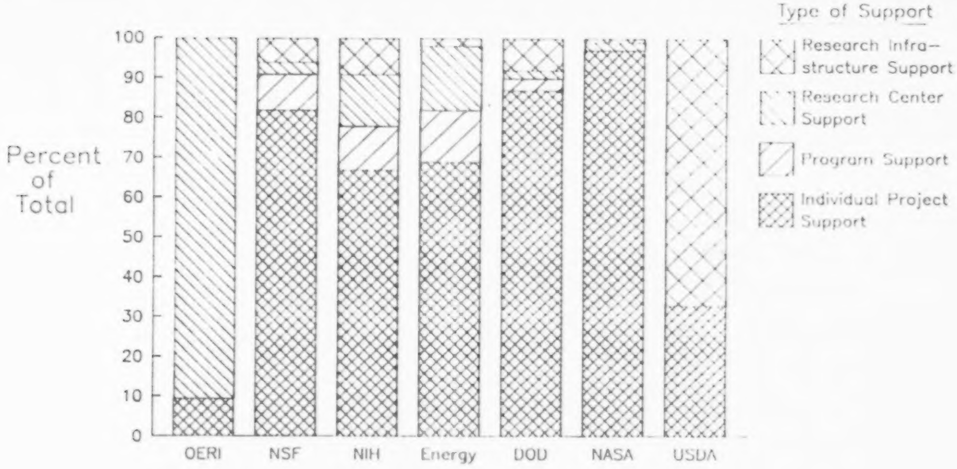


Federal Agency Funding for University Research, by Type of Support--1984

Types of University Research/Development Support	1984 Funding ($ millions) and Percentages by Agency						
	NSF	NIH	Energy	DOD	NASA	USDA	Total
Individual Project Support	82% ($774.8)	67% ($1,786.5)	69% ($223.2)	87% ($334.3)	97% ($213.0)	33% ($98.5)	-- ($3,430.2)
Program Support	9% ($80.0)	11% ($285.6)	13% ($42.2)	3% ($10.0)	< 1% ($.9)	-- --	-- ($418.7)
Research Center Support	3% ($23.6)	13% ($353.2)	16% ($50.8)	2% ($8.0)	2% ($5.0)	-- --	-- ($440.6)
Research Infrastructure Support	6% ($60.4)	9% ($224.3)	2% ($5.4)	8% ($33.0)	1% ($1.8)	67% ($198.2)	-- ($523.1)
Total	100% ($938.8)	100% ($2,649.6)	100% ($321.6)	100% ($385.3)	100% ($220.7)	100% ($296.7)	100% ($4,812.6*)

*Total funding by these six agencies was 90% of all federal funding for university research in 1984.
(Percentages total to 100 in columns, but not in rows in this Table.)
Source: Federal Funding Mechanisms in Support of University Research. GAO/RCED-86-53, February 1986.

Federal Agency Funding for University Research,
by Type of Support -- 1984



ATTACHMENT I

Laboratory Rural Initiative: FY 1988

As reflected in the Conference Report language accompanying the appropriation legislation in both FY'87 and FY'88, Congress expects the laboratories will:

- support further development of promising rural, small schools activities and practices;
- explore innovative organizational structures and technological approaches, including the use of state broadcasting systems, that can enhance the delivery of instructional services and professional development in rural areas;
- disseminate promising educational practices among public and private rural, small schools;

The FY'87 award was made in two parts. Part One, the core proposal, was funded for $3 million. After external review, the money was distributed equally among the nine laboratories. Part two, for supplementary proposals, was competitively awarded to those laboratories with the highest rated proposals. Supplementary proposals were to address particularly critical regional needs which could not otherwise addressed through part one.

The performance period of the work scopes for both part one and part two proposals funded in FY'87 is May 15, 1987 through June 15, 1989. The two year period of performance was designed to assure the responsible expenditure of money over time. Earlier attempts at rural school improvement have taught educators that change takes time and local level involvement is critical to successful implementation and productive outcomes at the school site.

Congress then appropriated an additional $3.83 million in FY'88. (A reduction from $4.0 million to $3.83 million reflects a cut of 3.6% taken in the overall laboratory program as a result of government-wide budget reductions.) The essential purpose of the FY'88 funding is to continue and extend work to improve rural education begun in FY'87. Activities will be supported during school year 1988-89 with the additional funding. The period of performance for the FY'88 funding and the entire intitiative will end September 30, 1989.

The labs will be encouraged to bring their activities to a successful conclusion with the FY'88 funds. "The meaning of "successful conclusion" of activities in this context depends on the exact task being carried out pursuant to FY'87 funding. For example, under Task 2 of the '87 funding, labs are to "identify, gather and disseminate information about promising rural education practices, resources, organizations and capacities". This work, focused on existing practices et al., can be reasonably completed within the funding period for the intitiative. Similarly, Task 3, which calls for labs to "establish or strengthen working relationships with rural co-partners", can presumably be accomplished fully.

Task 4, however, calls for the labs to design and provide new services to rural clients. The degree to which these services can be fully completed within the rural initiative time frame (2 years) will vary. In some cases, e.g., implementation of telecommunications-assisted programs, the activity may be more fully implemented. Other activities, including capacity-building, may not be so fully completed. "Completed" in the latter case may have several meanings, including arrangement of continued funding or other forms of support to continue the work.

An extra emphasis in FY'88 has been placed upon collaborative activities among labs and dissemination of knowledge from the initiative. The purpose of this emphasis is to have the broadest impact possible from the initiative, not only within individual regions, but also nationally.

Each of the laboratories is required by the Congressional provisions to evaluate all of its activities conducted under the rural initiative. The House committee language on evaluation of the initiative calls for the final report (September '89) to include information on student achievement, among other topics. Each laboratory is expected to use evaluation to help improve the operation of its programs and to document the extent to which the initiative has attained its objectives.

A final report on the impact of the rural education initiative in the regions will be submitted to OERI by each of the nine laboratories in July 1989. These will be utilized by OERI in the preparation of a comprehensive final report on the initiative due to Congress by September 1989. An interim report is due in June '88. In addition, a status report on the condition of education in rural, small schools is to be submitted to the Congress by September 1988.

The FY'88 funds will be awarded non-competitively in equal amounts among the nine labs. A panel of internal and external peer reviewers will review proposals for FY'88 funding, in accordance with Department of Education policies. Reviewers will indicate sections of proposals, if any, which need strengthening prior to funding. OERI intends to have the funds awarded in June 1988.

ATTACHMENT J

What Ails Education Research

CHESTER E. FINN, JR.

My purpose is to reflect on the state of education research and on what ails it. Part of what ails it, of course, is that the public regards much of our work with more than a trace of skepticism. Education research rarely gets credit for such headway as is being made in American education. Rather, it tends to be associated with educational faddism on the one hand and pointy-headed intellectualism on the other.

To put it simply, our labors haven't produced enough findings that Americans can use or even see the use of. Over the past two decades, there has been a goodly amount of systematic inquiry and a flood of studies, reports, and recommendations, yet our education system has by many measures worsened. I do not say that research has caused the decline, only that it has failed to counteract it. Education research has not fulfilled its role in the effort to improve our schools, perhaps because it runs into much skepticism from practitioners and policymakers. Hence, its effects are limited, and this in turn fosters skepticism as to its potential—a wicked cycle.

We all wish that education research enjoyed the attention and respect given the hard sciences. We suffer from status envy. But hard sciences are assumed to make a perceptible difference in people's lives. There is an intensity, an urgency about biotechnology and medicine and nuclear physics—a sense that tomorrow's answers may be too late, and that today's are already useful. Witness the world's top physicists assembling urgently in recent months to make the most of abrupt breakthroughs in superconductivity. Consider AIDS—doctors and medical researchers working round the clock to fight the virus and the epidemic. There's no fooling around here: when they find a cure (does anyone doubt that one day they will?), we'll all breathe a sigh of relief.

Unlike AIDS, ignorance is no emergency. It's more like a chronic affliction, a wasting disease. It's been around for some time now, and isn't likely to go away soon. Yet the impulse to eradicate it has quickened. People want reliable and effective methods of instruction for their children. They want sound approaches that produce results. The popularity of our little volume *What Works: Research About Teaching and Learning* is one illustration of that.

The next few years offer an authentic opportunity. Not since Sputnik has the hunger for education reform been so urgent or the need for our efforts so great. A day doesn't go by without headlines on "competitiveness," and under them a paragraph on the importance of education to America's economic and social vitality. The two are inextricably linked, most Americans realize. But what many overlook is the useful role that research can play in efforts to improve our schools and colleges. Education research is like a compass pointing toward improvements and providing means of measuring them, or keeping them on course.

Our mission in the Office of Educational Research and Improvement (OERI) is to support significant, useful, high quality research and to put its findings into the hands of Americans who can use them. Of course, only a fraction of such research is conceived in Washington. We in OERI therefore strive to identify important and innovative research ideas from elsewhere—some of which we support through the Field-Initiated Studies Program (FIS), formerly known as the Unsolicited Proposals Program.

For a time, this program was dormant. Indeed, the 1986 FIS competition marked the first time in three years that OERI (or its predecessor, the National Institute for Education) "opened the transom" to attract diverse unsolicited proposals for research. We accepted them from January through July of 1986. During that half year, 342 applications poured in, a whopping total by anyone's standards, especially as the FIS program had only $500,000 to award. At the end of the fiscal year, we scraped together all our loose change and were able to up the total to $725,000, which enabled us to fund 10 proposals. But this was still less than 3% of those we received.

To determine which proposals to fund, we used a two-tiered peer review process. It worked like this. At the first tier, 18 scholars judged the technical soundness and adequacy of the research design of each submission. These 18 experts "reviewed"—that is, they read, scored, and critiqued—applications proposing to conduct research in their areas of specialization. (At this stage, each proposal was evaluated by three of the reviewers.) Reviews were based on seven familiar criteria listed in the "Code of Federal Regulations": plan of operation, budget, quality of personnel, evaluation plan, adequacy of resources, significance, and technical soundness. Reviewers selected 47 proposals to advance to the second tier, where eight fresh reviewers rated each proposal, mainly in terms of significance. (Technical merit was no longer at issue, but we still had more proposals than resources.) Choices were required. But how to judge the competitors, most of which proposed to do wholly different things? We had a classic "apples and oranges" problem. The second panel helped us decide which fruit to serve.

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62. Let me say a bit more about what came through the transom in the first place. Two thirds (225) of the proposals originated in colleges and universities: the other third came from private and nonprofit organizations (56), individuals (24), schools and school systems (22), and state and local governments (9). Those from institutions of higher education were split almost equally between education departments and other departments, including English, business, psychology, history, math, and science.

A third of the submissions that were "eligible" to be judged (more about that presently) proposed to conduct fairly basic research. Another quarter aimed to conduct development activities of some sort. In other words, about three fifths of the eligible submissions proposed to engage in actual research and development. Six broad areas of inquiry attracted more than 20 proposals each: language curriculum (reading, writing, and others), higher education, school administration, adult literacy and dropouts, science, and early education and parent involvement.

Specific topics were, as one might expect, a mixed bag. Here's a partial sampling: education research in agriculture, remediation of a foreign accent, photodocumentation of 19th century commercial buildings, campfire teen leadership, word weaving, children's perceptions of subculture clothing, math anxiety, the relationship between metacognitive processes and eye movement coordination among literate and illiterate adults, psychological language theories behind *Sesame Street*, and the war of wills between parents and children.

My purpose is not to mock. There are few topics that couldn't yield something worth knowing, assuming the work were well-conceived and executed. But when resources are scarce (when aren't they?) we have to make choices. And some of what was offered for our consideration was pretty marginal.

As I indicated, not all of the 336 submissions were eligible to go through the review process. Forty-eight were disqualified before the competition even began. They lacked basic information. Hence, one out of seven proposals couldn't even be judged because it was in some important sense incomplete.

Incompleteness was not limited to the 48 that were disqualified. I discovered after plucking out and reading through a semi-random sample—every 10th one, 34 proposals in all—from the 336 submissions. I wanted to gain a clearer sense of the kinds of proposals the FIS competition had attracted. The sample turned out to be fairly representative: one of them was funded, four others made the finals, while three had been bumped from the competition as ineligible. Reviewer scores on the 31 eligible proposals I examined ranged from 26 (out of 100) to 88. The average was 53.

I've skimmed them all. I've also read the reviewers' comments. And I must report that too many of these proposals are an embarrassment to the education research community. They're burdened with skimpy plans, fat budgets, dubious experiments, worn-out hypotheses, disorganized writing, missing information, and ungeneralizable results. But the most lamentable shortcoming I encountered was that so many dealt with matters so esoteric or minuscule that they would benefit only a handful of people, assuming of course that they succeeded in doing what they proposed.

One applicant, for instance, offered to study the effects of mastery learning on the motor skills of elementary students. The experiment groups would be taught to throw, kick, catch, and strike via "mastery learning"—that is, a new skill would be introduced only after 80% of the class had reached a predetermined level of achievement. Control groups would learn the same skills by spending specified amounts of time on them, apparently without regard for whether students were ready to move on to the next skill. Reviewers commented that the proposal offered "far too little detail," that "it's hard to say what will be done [to test the hypothesis]." My own impression was that this proposal would have proven nothing urgent and little that we don't already know. It's interesting to note, however, that the proposal scored 40 out of 100—higher than nearly a quarter of all the proposals.

Another applicant proposed to determine the extent that telecommunications can enhance higher education associations' information-related functions. About this proposal one reviewer wrote, "I have trouble finding reasons to spend federal tax dollars on this kind of work. Who, other than [the institution proposing the study], can benefit from the results? How will the results influence education?" The findings from this study would have been interesting perhaps, but they would have made scant impact on our schools, colleges, and universities. Yet it scored 48—higher than nearly a third of the other proposals.

A third applicant aimed to demonstrate that building up elementary students' self-concept in math class would boost their performance in that subject, a wholly worthy goal. But the applicant failed to define clearly what was meant by "self-concept." Nor was it explained what exactly teachers would do to bolster students' attitudes about themselves, other than beginning class by asking students questions such as, "Where are you having difficulty? Have you been doing your homework? Why did you earn that grade?" About this proposal, which scored 45, a reviewer wrote, "I get the feeling we're looking at the emperor's new clothes."

Let me repeat: my purpose is not to mock the proposals. If resources were limitless, these and other projects might eventually have yielded something useful to someone. But times are lean. We can fund only those proposals likely to deliver significant, generalizable, useful results.

The complaints against these three proposals are fairly typical of other reviewer comments I read. So are the scores. Of the 288 proposals reviewed, three fifths scored below 60 out of 100, this being a kind of "cut off" score below which reviewers generally regard proposals as hopeless.

I'm disappointed by the big load of chaff we had to sift through to find the grain. And it's disheartening to think of all the professional time and energy that must have gone into these 342 proposals. The world did not benefit much from all the thinking and writing that went into a lot of them.

The 48 proposals that made it into the finals are another matter. I was heartened by their quality and variety. And the 10 chosen for funding stand a decent chance of yielding significant findings that our schools and teachers and parents will be able to use.

We've put a good deal of effort into the peer review process in OERI, though I'm not yet satisfied with it. The process still tends to shun innovative and unconventional approaches (as I pointed out in the August September 1986 issue of *Educational Researcher*). But as a means of netting a few shining proposals from the tide of applications that came in for the FIS competition, peer review worked.

So does the field-initiated idea. That's why, in OERI's fiscal 1988 budget—the fate of which is pending in Congress as I write—we have proposed to double the funding for the FIS program to one million dollars. Would that it could be more.

I hope, too, that each year's FIS competition will attract more proposals of the quality that other OERI competitions usually bring in. Our recent reading and literacy grants competitions, for instance, drew 108 proposals, more than 50% of which scored above 60. That's twice the percentage of FIS proposals that surpassed the hopeful mark. That the FIS competition seems to draw other than the best and the brightest encourages us also to continue targeting some federal research grants on particular education issues and purposes instead of leaving all competitions wide open. Actually, my own inclination is to do both kinds of things, as resources permit.

We all benefit when fresh ideas come in through activities such as the FIS program, and we hope to be able to continue to support good work and capitalize on it. But OERI cannot afford to be the sole source of funding for education research. That's why I'm encouraged by the growing number of education research opportunities recently provided by the private sector. I'm also heartened by several studies that in the past few years have produced significant insights into various aspects of education.

James Coleman's new work, for example, recently presented in his and Tom Hoffer's book, *Public and Private High Schools: The Impact of Communities*, seems to me terribly important. His concept of "social capital" may be on a par with Irving Fisher's idea of "human capital" conceived in the early 1900s. Coleman's findings move beyond mere descriptions of effective schools to explain sources of their effectiveness—sources he finds in the dynamics of communities and governance of schools. His insights provide a foundation for future studies of how these characteristics can be *built into* schools. Herb Walberg's work on education productivity is similarly important. The factors he has identified that increase learning—factors distilled from meta-analyses of hundreds of studies—can serve to focus efforts and resources where they're most likely to produce the greatest gains in educational attainment. These factors offer direction for educators, policymakers, and parents, as do John Chubb and Terry Moe's studies of the organizational and political contexts in which schools operate. Their findings illuminate crucial differences between public and private institutions. The fact that organizational structure and building-level autonomy can significantly affect school performance holds momentous implications for educators and policymakers—and for future research. Coleman, Walberg, Chubb, and Moe exemplify the education scholars of recent years whose work has lit the way both to future research and to improved education practice.

What other areas of educational inquiry appear likely to bear edible fruit in the next few years? I recently put this question to a dozen distinguished colleagues. Specifically, I asked them which areas of education research are likely to produce significant breakthroughs during the next five years, and which of these breakthroughs are apt to make the greatest impact on practice within that same five-year period? For their advice and insight, I'd like to thank David Berliner, Jeanne Chall, Jim Coleman, Bob Glaser, Pat Graham, Bill Hawley, Mike Kirst, Lauren Resnick, Lee Shulman, Mike Smith, Mike Timpane, and Herb Walberg.

Here are some "breakthrough" areas they suggested. To the right of each area is the number who mentioned it. Those without numbers were mentioned only once.

assessing student achievement	8
learning in the content areas	6
teacher effectiveness	5
higher order thinking skills	4
economic competitiveness and school learning	4
computers in the classroom	4
education productivity	3
applying findings to practice	3
opening up the school to meet parents and students' needs	
parent involvement	2
teaching "at risk" and other "special needs" students in regular classes	2
sorting out the most cost-effective education reforms	2
linking schools and other social services	2
teacher behaviors that communicate what they expect of students	
teacher assessment	
the relationship between informal learning outside the school and formal instruction inside the school	
how and when intentional, deliberate learning becomes automatic	

Of course, these conversations produced more than a list, and I'd like to try to summarize what was said about breakthough areas that were mentioned by more than one colleague.

1. Advances in assessing student achievement will make it possible to measure and evaluate student performance more accurately and efficiently. Most assessment instruments in our schools today are too blunt to get at what we need to know about student achievement. An array of more refined instruments will enable educators to get at precisely what they need to know about student learning—more quickly, more effectively, less painfully. Pencil-and-paper tests won't be abandoned but will be supplemented, and on occasion supplanted, by portfolios in writing and art classes, for instance.

2. Improvements in assessment depend, in part, on headway being made in content research. We've begun to recognize each academic subject as a different creature and this development holds enormous implications for the ways we think about learning, teaching, and learning to teach. More than one set of scholars is already working to identify the unique sets of knowledge and skills in math, science, reading, writing, and other subjects. They are uncovering what Bob Glaser calls "the hallmarks of competence" in specific disciplines and the lesser but necessary skills that enable students to progress from one of these hallmarks to the next. These "signpost skills" will focus student assessment on behaviors that are essential and observable. Once they have been mapped out, these hallmarks and signposts will chart a clearer course through the grades for each academic subject.

3. Of course, this breakthrough will boost the scientific side of teaching. Universities will find that they can do a better job of preparing teachers by designing specific

courses for teaching specific subjects. Students struggling to create a thesis statement or understand the causes of Civil War will no longer be left to master these difficult tasks unaided. Teachers of the future will know the common hurdles to specific learning tasks and how to help students clamber over each. Armed with a battery of strategies for assisting different kinds of learners, teachers may no longer find it expedient to "teach to the middle." The "shotgun approach" to instruction could well become obsolete. In addition to content-specific pedagogy, research is revealing traits and qualities that distinguish outstanding teachers from mediocre ones.

4. Our understanding of the skills involved in making inferences, drawing conclusions, building arguments, and solving problems is increasing dramatically. We'll soon know how higher order thinking skills can be better taught, learned, and assessed in each of the content areas. Teachers will then be better able to incorporate instruction in thinking skills into daily tests and lessons at every step of knowledge acquisition. As a result, students could absorb more than facts and fundamentals; they could be taught to use the methods of inquiry and habits of thought that scientists, historians, mathematicians, and writers use.

5. The computer will deepen its presence in schools and classrooms as software improves and teachers begin to see it as a powerful tool for getting the job done. The microcomputer offers more information than any teacher can, and it puts that information directly into students' hands, permitting them to interact with it—to manipulate graphs, enact simulations, edit texts. Eventually, a keyboard will be at the fingertips of every student in every class.

6. Economic growth and national "competitiveness" will continue to influence discussions of education policy. Most Americans buy the notion that school learning affects job performance. Even those on the assembly line must keep records of their work and write suggestions as to how products and processes might be improved. Certainly the abilities to read, write, and compute are critical in such instances. But what other school-learned skills translate most immediately and measurably into worker productivity?

7. The pressure is on to find ways to make the most of students' time and taxpayers' dollars. In which programs and at what grade levels can modest investments deliver maximum learning gains? The best answers may come when cognitive scientists and organizational analysts join efforts in seeking to identify leverage points. Improvements in student assessment will permit us to determine with greater accuracy which of these leverage points are the best investments and which schools and colleges deliver the best education product for the money.

8. The hunger for reliable, effective methods of instruction hasn't abated. If anything, educators, parents, and policymakers want to know more than ever what works in education. Useful research findings still need to be translated into clear, simple English that everyone can understand and use. Studies of Japan, effective schools, and other topics may be more immediately transferable to practice and may provide greater payoffs in the short term than will some of the other breakthroughs mentioned. But as of yet, much potentially valuable research information has made little impact on schools and classrooms. Perhaps this is because we have yet to come up with effective methods of translating research findings into forms that practitioners can use. What modes of disseminating information will actually increase teachers', administrators', policymakers', and parents' use of it?

9. Debate continues regarding the proper role of the school. Some private schools are adapting to changes in community needs by keeping their doors open 12 hours a day the year round. Parents see extended hours (during which attendance is voluntary) as an opportunity to provide what they personally can't—supervised time and structured activities in a tutorial, extracurricular, camp-like atmosphere. Schools that yield the scholastic and motivational outcomes parents want, at a price parents can afford, can't help but flourish. (Again, advances in student assessment will offer means of demonstrating outcomes and comparing schools' performance.)

10. That parents are vital partners in education is something we've known for centuries. But now we're moving beyond that notion as a sort of piety and seeking ways to reach particular groups of parents. What are the best means of contacting low-income, minority, or single parents? Through training, teachers will be alerted to the needs, interests, and capabilities of these groups. Through workshops and hotlines, parents will be offered information on topics ranging from school attendance policies to how to read to their children, discuss current events, or help with homework. Schools may discover ways to make parent-teacher conferences more effective. All these afford virtually untraveled avenues for seeking and securing support from perhaps the most powerful influence on students' lives.

There are 10 areas where research is likely to make a significant impact on school and classroom practices over the next five years. And with each breakthrough will come the subsequent challenge of getting the word out to educators, parents, policymakers—and to the education research community.

Earlier, I mentioned superconductivity. I'd like to think that a breakthrough in education research could stir a level of activity similar to that among ceramists, chemists, and others who are meeting and experimenting and working practically nonstop to develop applications for the new ceramic superconductors.

I've pointed to 10 areas that would produce "superconductors" in education. Why shouldn't they? The imperative to compete is no less urgent in education than in electronics. Never has tomorrow so depended on what students are doing today. And never have Americans been more ready to consider our findings—assuming they are worth considering!

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Mr. **Owens**. Thank you, Mr. Secretary.

My first response to your first chart, if I remember correctly—oh, thank you.

Mr. **Finn**. Let's back it up a little so that others in the room can at least get a glimpse of it, maybe.

Mr. **Owens**. The colors make it very graphic, the orange bar quite drastically, and that is part of the problem. When you compare the yellow and the green with the orange, the first thing I see is that the orange got so much smaller. That is part of the problem.

Would you comment—I am not going to ask you to lock yourself in, make a political statement on amounts of funding—but you heard what the businessmen said this morning about research and development as a percentage of the overall operation, and that we have a—what is it?—$750 billion operation.

Mr. **Finn**. We have about a $300 billion education operation in this country.

Mr. **Owens**. Oh, is it $300 billion.

Mr. **Finn**. About $300 billion is the total.

Mr. **Owens**. We don't expect the Federal Government to foot the bill for all of the research and development, you know. We were at the IBM Center for the Assistance of the Disabled and while we were there, we talked to the vice president in charge of the program "Writing to Read." Well, they financed that and they put that together, and it seems to be working very well in some places. So a lot of the research and development that is going to be carried out would not necessarily be the Federal Government, but don't you think the first and greatest problem is that the Federal Government's proportion is far too small compared to the task at hand? Without locking yourself into any figures, would you comment on percentage and overall commitment before we move into the components of what that finances?

Mr. **Finn**. Yes, sir. The total for all education institutions, schools and colleges in the country, as I said, is in the vicinity of $300 billion at the present time. Obviously, if 1 percent of that were being spent on research and development activity it would be $3 billion would be getting spent——

Mr. **Owens**. How much?

Mr. **Finn** [continuing]. $3 billion would be getting spent on research and development activity. If you disaggregated that by the proportions that the Federal Government and the State governments and so on spent, and got down to the fact that the Federal Government accounts for—at least the Department of Education, let me speak to that—accounts for about $20 billion out of the $300 billion, that is to say, about 8 percent, 7 percent of the total expenditure on education comes through the Department of Education, and if we had a $3 billion research budget and paid for 7 or 8 percent of it, we would be paying several hundred million a year—there is no doubt about that—through Department of Education sources alone for educational research.

I don't think that merely increasing the expenditure level, absent wisdom and intelligence about how to spend it, is per se a solution to anything, but I think that the lean rations here are surely part of the problem. We have sought, as you know, modest increases, not all of which have been—most of which have not been granted in the appropriations process. But I also have to say that we are not, as my statement said, we are not spending with maximum utility the money that we are now spending, either, so merely increasing the total isn't going to solve that problem.

Mr. **Owens**. Can you or any member of your staff comment on educational research and development that is being conducted by other branches of the Federal Government? The Army, for instance, or the Armed Forces, they do a considerable amount of education. I don't think there is much communication with the general education world, in terms of their techniques, et cetera, but can you comment on that?

Mr. **Finn**. In quantities, probably not, but let me ask Sally Kilgore, director of our Office of Research, to come forward for a minute. I know she is at least acquainted with some of the military work in this field.

Ms. **Kilgore**. I have been very intrigued with the work done at the Office of Naval Research. I am not as well acquainted with what the Army does in its research, but I am acquainted with their educational programs, and clearly some of their research on strategies for working with youngsters, particularly that are high school graduates and they are needing to learn and work in training programs that involve electricity and things of this nature, I think are exemplary and things that we could use and transfer directly. It wouldn't have to come through my office and be re-researched, but there is a lot of potential to extract things that they have developed.

We work more often or my discussions have been more frequent with the Office of Naval Research, where some of their work in foreign language education I think is quite exemplary and interesting. I don't know the amounts of funding that supports this particular work, but I think that it would be one of those little bars that might reach the ceiling, compared to perhaps the ones that we have here at OERI.

Mr. **Owens**. Would you say that—just to clarify your chart—I was asking a question about research done with education, and you have answered in that vein, but the chart, is that all research and development, those agencies? I think it is.

Ms. **Kilgore**. Yes, it is.

Mr. **Finn**. But is doesn't——

Mr. **Owens**. I mean, is research on weapons systems——

Mr. **Finn**. Research done through universities, Mr. Chairman, of all kinds, including weapons systems.

Mr. **Owens**. I'm sorry. It says "through universities," I see.

Mr. **Finn**. Yes, and as I said, these are not amounts, these are proportions, but any research carried out through a university by that agency is what shows up here. That is not necessarily the optimal way to display it, but that is the way we were able to get hold of some data for you.

Mr. **Owens**. On the issue of the fact that the centers and the labs have existed for some time now, and there are problems or criticisms in terms of what they produced or whether they focused on the right priorities, is OERI's leadership, yourself, totally helpless in shaping that agenda? In your RFP's and in your oversight responsibilities, your contracting, can't you shape the agenda more so than has been done?

Mr. **Finn**. Yes, sir.

Mr. **Owens**. Do you have the tools to do that and you have chosen not to, or——

Mr. **Finn**. Yes and no. The 9 lab contracts and 10 center grants that were in the final throes of competition when Secretary Bennett and I arrived were essentially shaped by the decisions that had been made before we arrived, as to what they were going to focus on. I mean, for example, the basic work of the labs which was set forth.

Mr. **Owens**. But the office has that, I am talking about the office has that power.

Mr. **Finn**. Yes, sir. The office has that power, and we have used it in the case of seven centers that we have inaugurated within the last 3 years and two more that are in the competition stage right now, and two more that are in the planning stage for fiscal year 1989 if we are funded for them. We have shaped their priorities and their topics according to things we thought were important and significant, and I feel reasonably good about those. Those are all centers, I should say. Those are not labs at all, the new ones.

Mr. **Owens**. But this administration, regardless of individuals, what time they have spent, has had the power to shape the agenda for the labs and centers, and previous administrations have had that power, too, so that we are not talking about something that grew up without direction out there.

Mr. **Finn**. Let me offer just a personal——

Mr. **Owens**. Negatively or positively, it was shaped by the Federal Government office responsible.

Mr. **Finn**. The competitions that took place in 1985 were the first competitions, by and large, for 20 years, so the executive branch didn't have much to say about shaping their missions previous to that because they were—the previous round of labs and centers was continued and continued and continued by act of Congress without ever being recompeted, so in 1985 there was an opportunity to shape their missions and agendas.

I have been joined at the table by Dr. Milt Goldberg, who runs the lab program, among other things, at the Department of Education, and I sense that he wants to comment.

Mr. **Goldberg**. I wanted to hear more closely what was being said, so I came up front. In all seriousness, Congressman Owens, there is a major difference in agenda setting between the labs and the centers, and that is that the lab agendas are set by their governing boards. We required, in the RFP's that were issued in 1985, that the laboratories establish governing boards that represent the major constituents in their regions, and that those governing boards set the work agendas for the laboratories. That differs quite considerably from the way the center agendas are set.

Mr. **Owens**. Did you do that or did Congress do it? Did you have power that you gave away, or did the law require that you do it?

Mr. **Goldberg**. No, the law did not require it. The Government did that. I mean, the administration did that.

Mr. **Owens**. So in your regulations you gave away that power?

Mr. **Goldberg**. That's right.

Mr. **Owens**. You funded a minicenter on citizenship.

Mr. **Finn**. No, sir. It is in the planning stage for fiscal year 1989, the minicenter on citizenship.

Mr. **Owens**. On government, on citizenship?

Mr. **Finn**. Yes.

Mr. **Owens**. How do you come to conclusions as to which minicenters you are going to initiate, what new initiatives you are going to undertake? Is that on the basis of previous research or——

Mr. **Finn**. The minicenters are a response the following problem: Most education research that has been funded by OERI has not looked at the teaching and learning of particular subjects. It has looked at generic, across-the-board issues like teaching and learning, or it has looked at institutional categories like elementary schools and secondary schools and higher education institutions, but it has not funded research that looked at the teaching of math or science or literature or art.

Mr. **Owens**. The ones that deal with curriculum don't——

Mr. **Finn**. Sir, we don't have any centers on curriculum.

Mr. **Owens**. None of them are dealing with curriculum?

Mr. **Finn**. Not explicitly, only very indirectly, mainly the centers on effective schools: the Center on Effective Secondary Schools, the Center on Effective Elementary Schools, look at school functioning, not at curricular content or at the teaching and learning of the subject. So we set out to focus a little more closely on the teaching and learning of subjects, and we invited other agencies to join us because our resources were slim.

The National Endowment for the Arts agreed to join, and in collaboration with them we now have five minicenters that we are involved with in the subjects I just mentioned—math, science, literature, art, and elementary subjects. The National Endowment for the Humanities on its own has just awarded a very similar minicenter in history. That makes six, and the Civics and Citizenship Center that we are planning for fiscal year 1989 would be number seven in this little set of centers dealing with particular subjects in the school curriculum and how they are taught and how they are learned.

Now how did we choose these? We thought these were important subjects in the school curriculum.

Mr. **Owens**. Are you continuing to use the format of the center because that is the intent of Congress? Congress forces you to do that, or do you like the center format?

Mr. **Finn**. Sir, there isn't any other research money.

Mr. **Owens**. You have to do it through centers?

Mr. **Finn**. There is no research money that isn't part of the minimum spending level for centers. In order to fund research now, we are obliged to figure out how to do it through a format called a center, and that is in fact what we have been doing. That isn't what we want to do.

Mr. **Owens**. If you didn't have that requirement, you would do it with independent researchers?

Mr. **Finn**. And small projects, and grants competitions, and a variety of other procurement mechanisms that allow a variety of different things to happen: Sometimes individual researchers. Sometimes it is short-lived projects. Sometimes it is multiple projects dealing with the same subject but done in different places. There are a whole lot of approaches you can use, and we would like to use them all, depending on the nature of the issue being looked into. Some are more suitable than others.

Mr. **Owens**. Let me just close by reading a section of the opening statement which I didn't read earlier:

> It is fitting to begin this set of hearings by quoting from the legislation that founded the National Institute of Education, language which is still preserved under current law governing the Office of Educational Research and Improvement.
>
> The Congress declares it to the policy of the United States to provide every individual an equal opportunity to receive an education of high quality, regardless of race, color, religion, sex, age, handicap, national origin, or social class. Although the American educational system has pursued this objective, it has not obtained that objective. Inequalities of opportunity to receive high quality education remain pronounced.

That is as much as I want. In view of that fact, that the basic thrust is clearly stated, why are we so late in arriving at a conclusion that we ought to make the education of the disadvantaged a priority? We now are going to establish a Center for the Study of the Education of the Disadvantaged.

I find it shocking that that priority is not reflected in the work that the centers and labs are doing now, and it is not reflected there. I don't see it reflected. I find it shocking that not a single lab or center is located in a black institution of higher education. I find it shocking that very few black educators, scholars who are well known in the field of education, are involved in these research efforts at any level, and yet there are a number of outstanding black scholars.

Could you comment on why there seems to have been a blind spot here?

Mr. **Finn**. I will comment, and my colleagues will also.

The language that you quoted from the 1972 NIE legislation, I helped to write. The 1972 NIE legislation which was enacted by this subcommittee was the product of a Nixon administration initiative, that currently Senator Moynihan and I were part of the team that designed in 1970. It was necessary to begin it with a statement of findings, and the statement of findings that you just quoted part of is derived from the message that President Nixon sent to Congress in the spring of 1970, modified somewhat by Congress, so the point is one that I share. It was alive and well as an issue in 1970 when that message was sent to Congress, in 1972 when it was enacted, and in 1988.

Many of our current centers and labs are engaged, one way or another, with the education of disadvantaged and minority youngsters, and I am going to ask Sally and Milt to comment on that in just a second. The new center that you find late in coming, which is part of our fiscal year 1989 budget request and which would, incidentally, be by our lights a large center—as requested, it is a $1.6 million center, which is the equivalent of three minicenters. It is a sizable investment.

Mr. **Owens**. I stand corrected. I had read somewhere $300,000 to $400,000. I don't know where I got that information but I am delighted to hear it is more substantial.

Mr. **Finn**. That's fine. It is a sizable investment by our lights. We agree that the education of disadvantaged kids, including but not limited to minority kids, is a serious problem facing the Nation, and insofar as research can help shed light on that problem, we would like to do more of it, not less of it. We would like to do the new center in addition to a good deal of activity that is already underway.

Now in terms of activity already underway, I would like to ask Sally and Milt to comment on some of the things that we are doing now.

Ms. **Kilgore**. It is very interesting, Mr. Owens. The comments that we received from the field, particularly researchers, should be of interest to you on the disadvantaged center. They said, "We feel like every center should be devoted to this topic," and I think that you would find that my centers do not think of this as a topic outside their purview, but rather it is part and parcel of what they consider a part of their agenda.

The center, for instance, for the study of—one that we recently competed on—reading has a large portion of its funding devoted to working with educationally disadvantaged children and what kinds of special reading skills or strategies may be most effective with them. We have a study of students at risk that looks at dropouts, that is at the Center for Secondary Schools. It is working with the Casey Foundation. As you know, they are beginning to do massive community/school collaborative activities in reducing dropout rates, and that center has been asked to evaluate those programs now over the next couple of years.

We also have work done at one—the center that is studying teachers and effective teaching and some of the problems of working conditions is focusing exclusively on urban schools because it knows that the most important problem of effective teaching is with our disadvantaged children, and how well we are doing it, and how well the schools make teachers or help teachers be effective in their instruction.

So we feel, although I think anybody could be desirous of more minority scholars involved in every aspect of education research, we feel like that the issue is something that has been of concern but has not had the focused concern we think this center would provide the opportunity for it to have.

Mr. **Owens**. They all responded that way, and indicated that they were all involved in efforts, projects which impact on the disadvantaged. Yet I noticed in an article written by the Secretary here, you had queried some researchers about what the most important kinds of research needed were, and the disadvantaged and various things related to disadvantaged were the lowest things on the list, those 14 items you had——

Mr. **Finn**. Yes, sir. That was——

Mr. **Owens** [continuing]. And you indicated how six people responded, I think, six or seven people responded, and all the items related to disadvantaged were responded by only one—there was only one response indicating that it was a priority item.

Mr. **Finn**. Yes, sir, but that wasn't our only source of input.

Mr. **Owens**. I am sure.

Mr. **Finn**. Sally conducted regional hearings.

Mr. **Owens**. But she spoke as if it is self-evident, and everybody assumes this, but I was shocked to find that given a question like that, they were the lowest items.

Yes?

Mr. **Goldberg**. On the issue of labs, Mr. Owens, one of the major aspects of this new RFP to which the labs responded was that there be a lot of effort devoted to collaboration among the laboratories and that they, together with their governing boards, identify the areas that they want to collaborate on. One of the main areas that they have selected is the area of at-risk children and the disadvantaged. That was an area identified by the nine governing boards. While it is hard to estimate a percentage of money, I would say that we are getting close to one-fourth of the lab money effort now is devoted to improving the education of disadvantaged youngsters.

Mr. **Owens**. I would appreciate receiving something in writing which would show how that is really happening.

Mr. **Goldberg**. Surely. We would be glad to do that.

I would like to add one other thing, just as a plug, that has nothing to do with either labs or centers, if I might, because of the question you asked about the disadvantaged. We just issued a publication out of OERI as a result of meetings that we held with the superintendents of the largest cities in the country over a period of the better part of a year. The superintendents of those cities identified a series of programs and procedures they were using to help address the dropout problem, and this is a publication that reflects not our views but the views of the big city superintendents, including, by the way, the chancellor of the New York City schools, who was a member of this group. It is called, "Dealing with Dropouts," and we would like to provide that for you if you don't already have it.

Mr. **Owens**. All right, so we agree that this is a major problem. It is unfortunate that we have arrived so late at the structuring of a special effort, but you say there are other efforts going on out there which this special effort I suppose will pull in and focus better, so I applaud that and a number of other people applaud it, also.

Why, then do you want to fold in the bilingual education problem with this effort? Bilingual education, it seems to me, has a lot of problems and concerns all its own, and the Nation ought to really take a hard look at its bilingual population as a great resource in the coming ideological struggle for influence in the whole world. It seems to me that they want to make a special effort to deal with maximizing the bilingual population's effectiveness, and there are a number of other considerations there in terms of just pedagogy, it seems to me, which don't necessarily dovetail with the mission of the Center for the Study of the Disadvantaged which is going to try to, I think, make up for some lost time. I just wonder, why are you folding them under and combining them? It seems to me a formula which will result in diluting the effort in the case of both.

Mr. **Finn**. Well, I am going to throw this to Dr. Kilgore in just a moment because she has had a lot to do with evaluating our various centers. Just a word of preface:

Partly, this is just a matter of money. Money is tight, even in our 1989 request, and the bilingual center—which was created, incidentally, just before I arrived—was created in a very unusual way by my predecessors. It was a 3-year contract, not a grant, a 3-year contract with a university to do a center on the study of bilingual education, with an option for the Government to extend that contract for another year or 2 years if the Government wanted to, for years 4 and 5.

Currently year 3 has wound up, and what we propose to do and intend to do is to extend the contract for year 4 at a slightly reduced sum of money because of our budget pinch, and then instead of extending it for year 5, we intend to start this new center—larger, incidentally—center on disadvantaged. Now there are a series of tradeoffs here, and let me pitch this ball to the director of research.

Ms. KILGORE. I think what Mr. Finn is referring to in discussing tradeoffs, given as we have shown, I think very vividly—even though Mr. Finn cannot appreciate its vividness—the limitations of our budget, we had to look very carefully at investments that were being made in other parts of the department, as well as in other agencies, to understand what we most uniquely could contribute in education research. With respect to the bilingual education, we had the following set of conditions:

The center that was awarded, that will be entering its fourth year beginning in May, provided not only a basic research agenda on bilingual education but also technical assistance to schools, and it also provided some development of curriculum materials. Now the bilingual agency within the Department of Education, OBIMLA, has both a very large and elaborate technical assistance program, where it has 16 centers that cover throughout the United States, and similarly it has a much smaller but nonetheless a curriculum materials development activity.

Now our decision was that we wanted to maintain and secure completion of the research that we had invested in or had been invested in, and it was for that reason that we chose to continue for this fourth year, to ensure the completion of quality work. We did, however, think that there was some redundancy, some overlap; that because of our scarcity of funds, the fact that the OBIMLA office does have a research function and fund about $3.6 million a year in research, did provide technical assistance to all regions in the country, and did have a curriculum materials component, that with the scarcity of funds it was a more responsible act to pick areas that were not being pursued within the department. For that reason, then, we pursued the study of disadvantaged.

You had a second question which was, were we folding this in? In part, the folding in of the bilingual issue is not one that we say we can all of a sudden combine them, but we can take a unique subset of the issue as we think it faces language instructions issues and classrooms in general, and not necessarily specific bilingual programs which we think OBIMLA can evaluate quite adequately. So what we are trying to do is look at language proficiency issues as they confront teachers in the classroom and propose research that can help teachers provide effective instruction when they have those kinds of constraints.

I think that this is not the happiest of all solutions, but certainly one that we felt was a responsible decision, given the resources that we had available.

Mr. OWENS. I am confused. You enunciated a number of other efforts which impact on the problem of bilingual education. Why are you folding the bilingual education center in the direction of the disadvantaged study, the Center for the Study of Disadvantaged, instead of under some of those other activities or combining some of those other activities? Why do you?

Ms. KILGORE. The other activities——

Mr. OWENS. It is a good political solution. I can understand that, but I don't understand the scientific and logical——

Ms. KILGORE. Yes. The other activities that I enumerated are not conducted in the Office of Research. They are conducted through the Office of Bilingual Education in another part of the Department, and we simply sought to complement their work in the long term by focusing on the language proficiency issue as it affects classroom instruction.

They have several studies, one of which, for instance, is the National Longitudinal Study on children under different classroom instruction practices in bilingual education. Nothing that our center was doing or probably what we could do in the future could compare to that, so we said this is something that, since it is being done someplace else, we will try to use our resources in a unique and efficient way.

Mr. OWENS. Is this a decision that is frozen, or is it negotiable or flexible?

Mr. FINN. Well, the Department's contract office has communicated it to the university that is currently operating the bilingual center, and I think they are currently planning on the expectation that it will endure. We are always open to advice and suggestion.

Mr. OWENS. That is the bilingual center political problem. The problem of initiating a new effort, the Center for the Study of the Education of the Disadvantaged——

Mr. FINN. Yes.

Mr. OWENS [continuing]. I would like to see it unencumbered with the political problems. Is it possible that it can be funded, put forth, without having to combine it with the bilingual education situation?

Mr. FINN. They don't both fit in our 1989 budget. That is the clearest answer I can give you. There is not enough money. We made what we thought was a reasonable reallocation of this research responsibility in fiscal year 1989, to the office and the department that is organized to do research in that particular area. There is no comparable office for disadvantaged children, and I think this is a reasonable decision for OERI to make.

Ms. KILGORE. If I may, Mr. Owens, if I think I understand your question, and I think I do, I think you are asking whether or not we would be able to take out any concerns about bilingual education as they might appear in a research agenda for the disadvantaged. Is that what you are talking about exactly?

Mr. OWENS. Yes. To put it more bluntly, I think you are compromising the integrity of a new effort by solving a budget and a political problem at the same time you launch your new effort, and I wondered can we avoid that? Could we launch the new effort and have it be, as I referred in my opening statement, a lightning rod for a new kind of priority setting and a new kind of mobilization of what exists out there already?

Mr. FINN. Yes.

Mr. OWENS. But if it is encumbered with the political problem from the beginning, I think you compromise the integrity of it and the credibility of it.

Mr. FINN. I appreciate your point. We will share with you and your staff something which is already in sort of circulation for public comment, which is a very preliminary work plan for the new Center for Disadvantaged. I don't think it is internally compromised, and I would certainly welcome feedback and comment on that.

Mr. OWENS. We have some material from you already on that.

Mr. FINN. OK.

Mr. OWENS. Finally, Mr. Secretary, I want you to comment on—and I am sure that when you hear somebody propose a model similar to the National Foundation or any other alternative, your first reaction is, Here we go again, reorganizing NIE, OERI, et cetera—but for the long run, the long haul, what would you see as an optimum structure?

Mr. FINN. Well, sir, we thought we had a structure that was functional under our current structure. We thought it made more sense than the previous structure. That is why we did it, and I still am persuaded that we do not have a structural problem. We have other problems that go beyond the structure.

I might note—you know this because we have discussed this—that H.R. 5 that passed the House yesterday restructures our structure anyway, by taking essentially out of the OERI arrangement the statistics function. What will be left behind will be labs and centers and a few other small odds and ends, so the structure is oddly getting changed in an unintended way for the research and improvement function, by virtue of the fact that the other function is going off on its own or semi on its own, and I am sort of sorry about that, though I am sure the statistics function will continue to prosper.

I don't believe that in this field of education, that it is wise to sever the research function fundamentally from the programmatic action agencies. I don't believe that the quest for some kind of completely apolitical entity can be fruitful. I don't think the subject of education lends itself to that. I don't think that people agree about what is more important than what, and as long as there are fundamental sets of differences of views out there, we are not going to accomplish something by creating a new structure to shield it, or we will simply pick up the preferences and priorities of the people that run the new structure and whoever funds them.

I don't believe that is the way to think. I would rather keep a structure, if not identical, certainly akin to the one that we have had these last couple of years, and work on its other problems, which are some of what we have been enumerating in this hearing and in the statements I have submitted.

Mr. OWENS. Are you satisfied that we are making the most effective and efficient use of all of the research related to education being done within the Federal Government by these other agencies? Are you satisfied that we have a system which can pull in in a reasonable timeframe the research being done by the private sector, nonprofit and profitmaking? Are you satisfied that we have a setup which allows to come to consensus within a timeframe that is effective, and not debate issues endlessly because of the fact that so many people feel they are politically tainted, that the structure does enclose them in a way which makes them politically questionable? You are satisfied that these are not real problems?

Mr. FINN. Well, yes and no. When we set out to, let's say, survey the state of research in a particular field, be it reading or the education of disadvantaged kids or any other topic, and pull together what has been learned by research in order to try to pull it together and disseminate it, we don't confine ourselves to research that our agency has paid for. We go looking around the whole world for good research, no matter where it came from or who paid for it or under whose sponsorship it was conducted.

So when we are in the dissemination business, and we are, we try to disseminate knowledge regardless of its origins. We do not have in the Federal executive branch any sort of hierarchical arrangement for education research and research related to education to be all drawn together in one place, and that is not all bad. It is in some ways desirable from the research community's standpoint to be able to take their ideas to more than one place and have more than one set of ideas and priorities governing whether that is going to be looked at this year.

There is some virtue in decentralization and diversity here, rather than centralization, but there is an inefficiency with it. I concede that. All I can say is that while the dissemination function has its own voluminous problems, we do try to disseminate everybody's best information, no matter where it came from.

Mr. OWENS. Do you think the Department of Defense would ever say that it is not all bad that defense-related research is spread out in a number of places?

Mr. FINN. I don't think I am going to try to speak for them this afternoon.

Mr. OWENS. I said it was the last question but I am tempted, since you have so much staff here, you said, to help answer questions, to ask one additional question. I said we visited the IBM Center for Assistance for the Technologically Disabled, and we also talked with the vice president in charge of the "Writing to Read" project. Is there any evaluation done by anyone in your Department of that program?

Mr. FINN. The "Writing to Read" program in particular?

Mr. OWENS. Yes.

Mr. FINN. I might say I have seen it in action in a couple of schools, and it is really very impressive to watch second graders on their computers with their writing program. That is scarcely systematic. That is a pure Finn anecdote but, as I have observed it, it is very impressive to watch.

Now do either of you know about systematic evaluations?

Ms. KILGORE. I have certainly discussed it with my staff, so I think we would be delighted to submit for the record whether either our reading center or the writing center is doing any work with that. I just don't know right offhand.

Mr. OWENS. Yes. I would appreciate it if you would pull up through your system any information.

Mr. FINN. We would be glad to.

Mr. OWENS. We can, of course, check ERIC, but there may be some things that have not been deposited with ERIC.

Mr. FINN. Nothing important, sir.

Mr. OWENS. I appreciate your testimony, Mr. Secretary, and your written statement. We will have some additional questions to submit to you, and we would appreciate your response. Thank you very much for coming.

Mr. FINN. Thank you, sir. We will be glad to submit——

Mr. OWENS. I'm sorry Mr. Bartlett had a time problem. I didn't know. Otherwise I would have given him the opportunity to ask questions first, but he didn't tell me.

Mr. FINN. If he wants to send us any, we would be happy to answer them in writing as well.

Mr. OWENS. We will do that. Thank you very much.

Mr. FINN. Yes, sir.

[Whereupon, at 1:45 p.m., the subcommittee adjourned.]

[Additional material submitted for the record follows:]

Questions from Congressman Steve Bartlett
Subcommittee on Select Education

Respondent: Chester Finn, Assistant Secretary for OERI

1. If you did not have labs and centers how would you use your research dollars and how would you organize OERI?

Answer: If freed from the constraints of large minimum spending levels for labs and centers, OERI would be able to design a system of distributing research and development funds more effectively among individual scholars, university-based research centers, a variety of research, development, dissemination and professional organizations, States, and localities. Under this system, a substantially larger percentage of OERI research and development funds would be directed to individual researchers. We would have an expanded field initiated studies program to allow researchers to suggest topics for study. We would also conduct numerous grant programs that would be directed toward either individuals or institutions. In consultation with scholars, practitioners, and policymakers, OERI would identify important topics for investigation, define the issues involved, and allow individuals or groups of individuals or institutions to develop research plans and compete for these funds. OERI would thus be able to tailor the nature of a given competition to the issues and nature of the problem, not to the limited capabilities of a certain kind of research entity.

OERI would extend analogous practices to research centers as well, meaning we would use center funds in a more varied manner than at present. We would have varied models for centers, some larger and some smaller, some of lengthy duration, some of shorter. We would allow capable entities other than universities, such as think-tanks and other non-profit agencies, to sponsor centers. And, we would allow centers more leeway in "subcontracting" work to individuals, both those associated with universities and those not. Simply put, there would be more chances for us to state topics for research, then have them examined from various viewpoints and in various ways.

The Office of Research would have to coordinate this expanded and more varied role. Such coordination would include not only running the various competitions, but ensuring that OERI and the rest of the education research community, along with the broader education community, are apprised of the results of these projects.

With regard to dissemination and technical assistance activities, we would examine various mechanisms, including but surely not limited to regional labs. For example, we might support suitable entities in each of the 50 states. These might be State education departments; they might be universities; they might be consortia of school systems; associations, teacher groups, or National Diffusion Network facilitators. Such multi-purpose organizations could use either direct or indirect service strategies and would be expected to serve governors, State legislatures, education agencies, professional associations, and practicing educators. They might also work closely with OERI on data gathering and analysis activities. This arrangement would involve a larger number of individuals and organizations than at present, would mitigate the problems caused by the regional character of the labs, and, since competitive bidding would be used, would ensure the best use of available funds.

2. Do you believe you are getting a good return on your investment with the current structure of educational research at the federal level?

Answer: I believe that, on balance, we are not getting a sufficient return on our education research investment at the federal level. Spending nearly all our research dollars on labs and centers has cost us severely in terms of research opportunities. Funding for individual researchers has been all but non-existent; this has no doubt stymied the development of many potentially valuable ideas for systematic inquiry and the improvement of practice. Second, other entities, such as professional associations or loosely organized groups of scholars, have been all but shut out of federal funding. Third, we are limited in the number of education problems we can examine at any given time to those under consideration by labs and centers. And fourth, OERI has been greatly restricted in its own intramural research activities.

In terms of our investments in the labs and centers themselves, the news is mixed. The labs, I believe, have not been a reliably remunerative investment. Their impact--while admittedly difficult to assess--is practically invisible. For decades, the labs were shielded from competition by Congress; this has further diluted the value of the taxpayer's investment in them. Finally, these institutions simply cannot provide services to more than a few districts in our immense education system. That we spend around half of OERI's research and development funds on them is, then, almost by definition, a poor investment.

Our investment in centers has been more fruitful. Though their impact is also difficult to gauge, they do a different kind of work than the labs. Indeed, research almost always has less immediate impact than training and service. While some centers do little work of conspicuous value, others are solid and productive. But the current arrangement of a limited number of relatively large centers--which we inherited from NIE--still has the effect of confining the number of topics we research and the approaches we can take to the study of each topic.

3. What balance do you think should be struck between investing in research by individual researchers and research conducted by institutions such as labs and centers?

Answer: It is difficult to define precisely what the proper balance should be. It will change over time. And it is not clear that OERI or its predecessors have ever had an effective balance. Our planning over the past few years has been based on the vast majority of our funds being earmarked for labs and centers, so we have not really been able to address this question.

I should note briefly, as I stated in my testimony, that other agencies with significant research budgets have a far different spending distribution than OERI. NSF, NIH, DOE, DOD, and NASA all spend over 65 percent of their research budgets on individual researchers and projects. This fact is instructive, though it should not necessarily prompt us to emulate another agency's specified formula.

My suggestion is, quite simply, that OERI be granted broad flexibility with research funds, flexibility that would allow us to target funds to projects, not to entities or institutions. These projects, which would naturally focus on a great range of education topics, might be large or small, might be of short or lengthy duration, might involve one distinguished researcher or a group of researchers, and might be located in one institution and location or in several institutions and locations.

The point is that most significant education issues ought to be examined from several perspectives, through several lenses, if you will. Rather than having alternative certification of teachers examined only by researchers in a single center, for example, we might also have individual researchers in numerous different school systems in several States, via grants or fellowships and for varying lengths of time, also studying alternative certification. These researchers would investigate aspects of alternative certification not addressed by researchers in the alternative certification center, and they would likely offer insights on the subject not deduced by those working within the context of a center. Having such flexibility, of course, means that we cannot accurately predict how our funds would be distributed among individuals and institutions. But surely a much greater proportion of our research dollars would go to individual researchers than at present.

I should add that, in at least one instance, we have already been able to do something like I just described. During FY 1987, we created a five-year Center for the Study of Reading. But we were also able to spend about $500,000 on some small and medium sized reading projects of varying duration that are being carried out by a mix of individual researchers and groups of researchers. These "literacy grants" allowed us to examine problems related to reading that were not being covered by the larger center.

4. Do you see any alternatives to the present structure at OERI that might be more productive?

Answer: I believe that the present structure of OERI is serviceable and productive. But if we were allowed to spend our research, development, and dissemination money differently, we might need to make some alterations within this structure to refine and hone our operations. Were we able to have greater flexibility over this money, we might, for example, have to modify some of the units within the Office of Research, Programs for the Improvement of Practice, and Information Services to administer these funds properly.

5. What should the priorities be for educational research in the 1990's?

Answer: The Department published a notice of proposed biennial research priorities last November 20 in the Federal Register. This NPRM contained a listing of some 19 topics for preference in the Department's various grants programs; the topics include literacy, assessment, success of state reform efforts, education of students-at-risk, school management, parental choice, international indicators, citizenship and character education, and early childhood learning, to name a few. These priorities were developed in concert with researchers, practitioners, civic and business leaders, policymakers, interested citizens, and professional associations from all over the country, many of whom participated in a series of regional forums sponsored by the Department. I believe that these are good priorities, and these categories should guide our efforts over the next few years.

I also think that the five "themes" in Secretary Bennett's new report, American Education: Making It Work, offer a sound guide for selecting research priorities. These are: Strengthening content; ensuring equal intellectual opportunity; establishing an ethos of achievement; recruiting and rewarding good teachers and principals; and instituting accountability.

Improvement of Educational Outcomes for Students-at-Risk

Identifying what makes some schools and certain educational strategies successful in lowering dropout rates and raising achievement levels of those students having the greatest difficulty in terms of learning and motivation.

Student Achievement and Motivation

Conducting research on student achievement with a concentration on conditions and practices that affect student motivation and interest in learning.

Teaching and Learning Foreign Languages

Investigating successful practices for teaching and learning foreign languages. Understanding effective training practices for teachers of foreign languages.

Management and Organization of Schools

Examining the dynamics of educational organizations, management and leadership strategies and how leadership practices can improve instructional programs, school discipline, and school productivity.

Technology in Education

Applying the advances in communication technologies to problems of educational productivity, including the reduction of costs in services and the enhancement of the quality of instruction.

Parental Choice in Schooling

Studying the effects of various options in education, including magnet, private and alternative schools, as well as home and independent learning.

Limited English Proficiency

Investigating the effects of policies, practices, and programs on the quality of education for students with limited English proficiency.

Citizenship and Character Education

Understanding the processes of citizenship and character education, concentrating on what is taught and learned in schools and communities, how learning takes place, and determining how education may affect adult participation in civic life.

Recruitment, Training, and Retention of School Professionals

Analyzing policies, programs and practices designed to improve the quality and effectiveness of the professional and support personnel in schools, and identifying staff development and organizational practices that contribute to improved educational outcomes.

Assessment of Postsecondary Education

Investigating the effects of different coursework patterns and other criteria changes on both the general achievement levels and longer-term attainments of college graduates; developing new indicators of college students' learning, and assessing the current state and future prospects of graduate education in the traditional arts and science fields. Analyzing evidence of program effectiveness and instructional strategies in the area of adult learning.

Early Childhood Learning

Obtaining new evidence and examining the characteristics of early childhood learning, which spans the preschool through early elementary school years. Identifying useful information for educators and parents about the potential and acutal learning capabilities of young children.

Library Research

Investigating the needs and data on the resources and services available to young adults in public libraries.

International Education

Conducting comparative studies of the experience of other democratic cultures with problems and issues of special interest in American education, e.g., citizenship education, curriculum content and educational choice.

Educational Finance and Productivity

Identifying policies and finance mechanisms that contribute to improvements in organizational and institutional productivity in public and private educational institutions, agencies, or programs.

Teaching and Learning Content Knowledge

Investigating student achievement, what is taught and learned, and how it is assessed in the various core curriculum areas (e.g., science, mathematics, history, goegraphy, etc.)

Executive Order 12606—The Family

Some of these proposed priorities may have a positive impact on the family and are consistent with the requirements of Executive Order 12606—The Family. These proposed priorities strengthen the authority and participation of parents in the education of their children.

Invitation to comment

Interested persons are invited to submit comments and recommendations regarding the proposed research priorities.

All comments submitted in response to this notice will be available for public inspection, during and after the comment period in Suite 610, Capitol Place, 555 New Jersey Avenue, NW., Washington, DC 20208 between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday of each week except Federal Holidays.

(20 U.S.C. 1221e)

Dated: November 18, 1987.

William J. Bennett,

Secretary of Education.

[FR Doc. 87-26847 Filed 11-19-87; 8:45 am]

BILLING CODE 4000-01-M

DEPARTMENT OF EDUCATION

Proposed Research Priorities

AGENCY: Department of Education.

ACTION: Notice of Proposed Biennial Research Priorities.

SUMMARY: The Secretary proposes to establish research priorities for Fiscal Years 1988 and 1989, and invites public comment. These priorities are principal components of the research and development agenda to improve education in the United States.

DATE: Comments must be received on or before January 19, 1988.

ADDRESSES: All comments concerning these proposed funding priorities should be addressed to Dr. Lawrence Bussev, Jr., Office of Educational Research and Improvement, Office of Research, Department of Education, 555 New Jersey Avenue NW., Suite 610, Washington, DC 20208–1633.

FOR FURTHER INFORMATION CONTACT: Dr. Arthur Sheekey, (202) 357–6079.

SUPPLEMENTARY INFORMATION: Section 405 of the General Education Provisions Act, as amended by the Higher Education Amendments of 1986 requires the Secretary to publish proposed research priorities in the Federal Register every two years not later than October 1, and to allow a period of sixty days for public comments and suggestions. Following consideration of public comments, the Secretary will publish these priorities in final form.

The proposed research priorities were developed in consultation with researchers, practitioners, civic and business leaders, policymakers, interested citizens, and professional associations all over the country, some of whom participated in a series of regional forums sponsored by the Department. The Secretary may implement some or all of these priorities as adopted in final form in competitions in Fiscal Years 1988 and 1989 under the Educational Research Grant Program and the Regional Educational Laboratories and Research and Development Centers Program. In addition, the Secretay may commission papers and undertake research within the Department to implement some or all of the final priorities.

Proposed Research Priorities

English Literacy, Including Reading, Writing, and Language Skills

Conducting research on issues related to the teaching and learning of reading, writing, or language skills. Understanding how effective programs work, how they are developed, and how they influence student competencies in these areas.

Improvement in Education

Assessing the implementation and impact of State and local reform initiatives, with particular emphasis on the refinement of measures of effective school, teaching and classroom practices.

Home, Family, Cultural and Community Influence in Education

Describing the impact of family, culture, and community on education. As applicable, identifying existing and effective strategies to encourage or facilitate parental involvement in education.

Improvement of Educational Outcomes for Students-at-Risk

Identifying what makes some schools and certain educational strategies successful in lowering dropout rates and raising achievement levels of those students having the greatest difficulty in terms of learning and motivation.

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(20 U.S.C. 1221e)

Dated: November 16, 1987.

William J. Bennett,

Secretary of Education.

[FR Doc. 87-26847 Filed 11-19-87; 8:45 am]

BILLING CODE 4000-01-M

DEPARTMENT OF EDUCATION

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NEW YORK TIMES
AUGUST 24, 1987 - Page A18

Needed: A Quango for Education

It is not enough to throw money, managers, good intentions and good ideas at America's failed education system. What's needed is credible assessment of such intentions and such ideas and the way to get it is from a quango.

A quango is not a dance from Argentina, or a furry, sharp-clawed mammal that feeds on eucalyptus leaves. A quango is what the British call a quasi-autonomous nongovernmental organ, a private agency that works closely with government on issues like social policy.

There are useful quangos, though not often called that, at work in the United States, some in education. A well-financed, professionally led quango could provide the forum to do what badly needs doing: to discover what ideas do and don't work, to what extent and at what cost. It would bring together educators, funders, program operators and researchers into an Education Demonstration Research Corporation to carry out rigorously designed demonstrations in school systems throughout the country.

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Cities and states, with help from Washington, are spending billions on schools, yet students aren't learning. The result is a rash of efforts to reduce truancy and dropout rates; to introduce computer literacy and foreign languages in the early years; to set up after-school programs; to beef up job readiness programs; to encourage corporate-school partnerships. Few of these programs produce reliable knowledge about what works. It is difficult to generalize from experience that has not been measured or evaluated. Results are largely anecdotal.

A new education quango would be modeled on the Manpower Demonstration Research Corporation, a remarkable quango that created the data base that convinced Republicans and Democrats that welfare recipients are willing and capable of working. Randomly assigning students, and in some cases teachers, to experimental and control groups would be important in ascertaining what works in education. Often within two or three years results of a well-designed demonstration can lead to new policies.

There is need also for longitudinal studies, conducted over many years, testing long-run effects. Though of immense potential value, such studies are costly and are rarely done. Nowhere has their value been demonstrated more dramatically than in the Perry Preschool Program in Ypsilanti, Mich.

The program started in 1962 and by 1965 spawned Head Start. Researchers followed the same students for 20 years. They have established that early childhood education has remarkable lasting benefits. Arrest rates and teen pregnancy were markedly lower in later years among children who participated in the program. Many more graduated from high school, went to college and entered the labor market.

Whenever people talk about what works in education, this longitudinal study always comes up. The Ford Foundation is rightly proud of having created M.D.R.C. and deserves credit for having stayed with it for 15 years. The experience makes the case for someone, whether Ford, another foundation or a consortium, to build the same base for progress in education.

OVERSIGHT HEARING ON THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT [OERI]

THURSDAY, APRIL 21, 1988

House of Representatives,
Subcommittee on Select Education,
Committee on Education and Labor,
Washington, DC.

The subcommittee met, pursuant to recess, at 10:07 a.m., in room 1310A, Longworth House Office Building, Hon. Major R. Owens (chairman of the subcommittee) presiding.

Member present: Representative Owens.

Staff present: Maria Cuprill, staff director; Laurence Peters, legislative counsel; Bob Tate, legislative analyst; Jillian Evans, committee clerk; and Gary Granofsky, research assistant.

Mr. Owens. The Subcommittee on Select Education will come to order.

Today's hearing is a continuation of the hearing begun yesterday. I will not at this point attempt to summarize some of the testimony we heard yesterday. However, during the course of the discussion here with the panelists, I will summarize when pertinent some of the discussion that took place yesterday.

We have supplied each one of the panelists appearing today with a copy of the testimony of Chester Finn, the Assistant Secretary, and we certainly don't expect you to read it today, but we think it's important that you do read it later on.

We do invite all of the panelists to be part of an ongoing process. We are very much interested in seizing the initiative and taking advantage of the fact that we do have time between now and the reauthorization for OERI. We don't think we should wait necessarily until that reauthorization process is begun in order to make certain recommendations and to take certain actions. The issue is there is a need for urgency in a number of areas, and we certainly will not necessarily wait.

We will summarize at the end of today's hearing some steps specifically that will be taken by the subcommittee, but in case some of you do have to leave before then, I just want briefly to state that the subcommittee is committed to moving this process as fast as possible. We will enlist the aid of the full committee. We will issue a report on these hearings separate from the hearing proceedings themselves, a report with some concrete recommendations, no later than June 15.

We do hope that we can call upon all the panelists and others for other additional consultations as this process goes forward.

So, I want you to bear that in mind, and I do wish to say at the outset that I have read and reviewed the testimony of the panelists appearing today and found it very enlightening, and some of it quite inspiring. The intensity and thoroughness of some of the statements is quite impressive and quite inspiring. We think that we certainly have a partnership with the people who have been invited to testify, a partnership in this process, and we are quite pleased about that.

At this time, without objection, I would have my prepared opening statement included in its entirety in the record.

[The prepared statement of Hon. Major R. Owens follows:]

SELECT EDUCATION SUBCOMMITTEE OVERSIGHT HEARINGS ON THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT (OERI), APRIL 20, 21, 1988

OPENING STATEMENT OF CHAIRMAN MAJOR R. OWENS

A WELL-FOCUSED AND ADEQUATELY-FUNDED RESEARCH AND DEVELOPMENT PROGRAM WILL PRODUCE THE SAME QUALITY AND AMOUNT OF RESULTS AND BENEFITS FOR AMERICAN EDUCATION THAT SIMILAR RESEARCH AND DEVELOPMENT ACTIVITIES PRODUCE IN OTHER SPHERES OF HUMAN ENDEAVOR. OUR PUBLIC HEALTH PROGRAMS, OUR SPACE RACE, AND OUR DEFENSE APPARATUS ARE ALL REPLETE WITH OBVIOUS EXAMPLES OF THE FRUITS OF SUBSTANTIAL INVESTMENTS IN RESEARCH AND DEVELOPMENT.

SINCE, AMONG CIVILIZED PEOPLE IN GENERAL, AND PUBLIC DECISION MAKERS IN PARTICULAR, IT IS NO LONGER NECESSARY TO OFFER ARGUMENTS TO PROVE THE VALUE OF RESEARCH AND DEVELOPMENT, THIS HEARING WILL BE CONCERNED PRIMARILY WITH THE FOCUS OF OUR PAST, CURRENT, AND FUTURE RESEARCH AND DEVELOPMENT EFFORT IN EDUCATION. WHAT HAVE WE LEARNED FROM OUR INVESTMENT TO DATE? ARE WE HAVING AN IMPACT ON CURRENT CRITICAL NEEDS? IS THE PRESENT SYSTEM OF RESEARCH CENTERS, LABORATORIES, INFORMATION BUREAUS AND INDEPENDENT RESEARCHERS MEETING THE NEEDS OF THE EDUCATION COMMUNITY? GIVEN THE INEVITABLE LIMITATIONS ON RESOURCES, ARE WE CONCENTRATING FIRST ON THE MOST URGENT NEEDS?

LAST BUT NOT LEAST IS THE QUESTION OF HOW WE CAN ENLIST THE SUPPORT OF THE LARGER DECISION MAKING COMMUNITY AS WE STRIVE TO CLOSE THE AWESOME GAP BETWEEN THE PRESENT RESEARCH AND DEVELOPMENT INVESTMENT FOR EDUCATION, AND THE AMOUNT OF RESEARCH AND DEVELOPMENT FUNDS NEEDED TO MOUNT A REALISTIC AND SCIENTIFICALLY RESPECTABLE LEVEL OF ACTIVITY. THE PRESENT PAUCITY OF APPROPRIATIONS IS A SCANDAL. THERE IS NO LEGITIMATE DEFENSE FOR THE FAILURE OF THIS NATION TO APPLY STANDARDS TO ITS MISSION

IN EDUCATION SIMILAR TO THE STANDARDS APPLIED TO ITS MISSION FOR THE EXPLORATION OF SPACE. INDEED, THE SPACE EXPLORATION EFFORT HAS REACHED A PLATEAU PARTIALLY DUE TO THE ABSENCE OF THE BRAIN POWER NEEDED TO OVERCOME OBSTACLES AT MANY LEVELS -- ADMINISTRATIVE AND ORGANIZATIONAL AS WELL AS TECHNICAL AND SCIENTIFIC. THE COMPLEXITIES OF OUR PRESENT SOCIETY MANDATE A CLOSE RELATIONSHIP BETWEEN THE QUALITY AND QUANTITY OF OUR EDUCATION EFFORT AND THE QUALITY AND QUANTITY OF ALL OTHER SOCIAL, SCIENTIFIC AND INDUSTRIAL ACTIVITIES.

THE PROCESS OF WINNING SUPPORT FOR HIGHER AUTHORIZATION AND APPROPRIATION LEVELS MUST BEGIN INTERNALLY WITHIN THE EDUCATION COMMUNITY. CAN WE AGREE ON PRIORITIES? CAN WE AGREE ON THE NEED FOR A GREATER SENSE OF URGENCY IN MEETING CERTAIN CRITICAL EDUCATION NEEDS? CAN WE FORGE MEANINGFUL SYSTEMS OF ACCOUNTABILITY TO COMBAT ACADEMIC APATHY AND ACADEMIC CORRUPTION? CAN WE CORRECT OUR OWN SHORTCOMINGS IN THE AREAS OF COMMUNICATION AND CROSS-COORDINATION; ELITISM AND SCHOLAR TRIBALISM? AND FINALLY, TO DOUBTING DECISION MAKERS, CAN WE PLEDGE TO ACHIEVE MEANINGFUL RESULTS IF OUR EFFORTS ARE ADEQUATELY FUNDED?

PERHAPS THE LONG OVERDUE NEW INITIATIVE OF THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT WHICH PROPOSES TO FUND A CENTER ON THE STUDY OF THE EDUCATION OF DISADVANTAGED STUDENTS CAN BE UTILIZED AS A LIGHTNING ROD TO OPEN A NEW ERA OF ADEQUATE FUNDING FOR CRITICAL PROBLEMS. PERHAPS THE LIMITED AMOUNTS PRESENTLY BEING PROPOSED FOR SUCH A CENTER SHOULD BE USED TO FINANCE INDEPENDENT RESEARCH ON THIS URGENT TOPIC, AND TO DEVELOP THE MASTER PLAN FOR A RESEARCH CENTER WORTHY OF THE TASK TO BE FUNDED AT A MUCH HIGHER LEVEL IN THE NEXT FISCAL YEAR. PERHAPS ADDITIONAL FUNDS SHOULD BE MADE AVAILABLE FOR EXISTING CENTERS, LABORATORIES, AND INFORMATION BUREAUS WHICH JOIN THE EFFORT TO ESTABLISH SUCH A PIVOTAL

CENTER BY OFFERING TO COLLABORATE WITH EACH OTHER AND WITH INDEPENDENT RESEARCHERS ON ACTIVITIES WHICH ARE RELEVANT TO THE ACHIEVEMENT OF THE GOALS OF THE CENTER.

AND FINALLY, PERHAPS WE CAN MAXIMIZE AN EFFORT TO REACH OUT TO THE PRIVATE SECTOR FOR ITS CONTRIBUTION TOWARD THE VERY AMBITIOUS BUT WORTHWHILE GOAL OF IMPROVING OUR EFFORTS TO EDUCATE DISADVANTAGED STUDENTS. PUBLISHERS, CONSULTANTS, COMPUTER MANUFACTURERS, AND OTHERS, SHOULD BE VIGOROUSLY RECRUITED. AND BEYOND THE SPECIAL THRUST TO LAUNCH THIS NEW CENTER, THE PRIVATE SECTOR SHOULD BE INVITED TO BE AN ONGOING PARTNER WITH THE FEDERAL GOVERNMENT IN THE NATION'S OVERALL RESEARCH AND DEVELOPMENT MISSION. THE EXPLORATION OF NEW WAYS TO STRUCTURE SUCH A PARTNERSHIP -- POSSIBLY EVEN A "QUANGO" -- IS AN ITEM OF GREAT INTEREST TO THE SUBCOMMITTEE ON SELECT EDUCATION. WE ARE ANXIOUS TO HEAR NEW IDEAS AND PROPOSALS.

IT IS FITTING TO BEGIN THIS SET OF HEARINGS BY QUOTING FROM THE LEGISLATION THAT FOUNDED THE NATIONAL INSTITUTE OF EDUCATION, LANGUAGE STILL PRESERVED UNDER CURRENT LAW GOVERNING THE OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT (OERI):

"THE CONGRESS DECLARES IT TO BE THE POLICY OF THE UNITED STATES TO PROVIDE EVERY INDIVIDUAL AN EQUAL OPPORTUNITY TO RECEIVE AN EDUCATION OF HIGH QUALITY REGARDLESS OF RACE, COLOR, RELIGION, SEX, AGE, HANDICAP, NATIONAL ORIGIN, OR SOCIAL CLASS. ALTHOUGH THE AMERICAN EDUCATIONAL SYSTEM HAS PURSUED THIS OBJECTIVE, IT HAS NOT ATTAINED THAT OBJECTIVE. INEQUALITIES OF OPPORTUNITY TO RECEIVE HIGH QUALITY EDUCATION REMAIN PRONOUNCED. TO ACHIEVE THE GOAL OF QUALITY EDUCATION REQUIRES THE

CONTINUED PURSUIT OF KNOWLEDGE ABOUT EDUCATION THROUGH RESEARCH, IMPROVEMENT ACTIVITIES, DATA COLLECTION AND INFORMATION DISSEMINATION."

THE ENABLING LEGISLATION, WHILE ACKNOWLEDGING THE RESPONSIBILITY OF THE STATES AND LOCAL GOVERNMENT IN THE AREA OF THE NATION'S SCHOOLING, MAKES CLEAR THE CENTRAL MISSION OF THE FEDERAL RESEARCH DEVELOPMENT AND DISSEMINATION ENTERPRISE. THESE HEARINGS WILL BE AN EFFORT TO DETERMINE HOW FAR WE ARE FROM REACHING THE CENTRAL GOAL OF REDUCING INEQUALITIES OF OPPORTUNITY. TO WHAT EXTENT IS THE PRESENT STRUCTURE OF OERI ADEQUATE TO THE CHALLENGE OF MEETING THESE HISTORIC GOALS? HOW HAVE RESOURCES BEEN DIRECTED TO MEET THE EDUCATIONAL RESEARCH NEEDS OF THE NATION, AND HAVE THEY BEEN USED EFFICIENTLY AND EFFECTIVELY? WHAT PROGRESS HAS BEEN MADE IN THE FIFTEEN YEARS SINCE THE DEPARTMENT'S FOUNDING AND THE TWO DECADES OF WORK CARRIED OUT BY THE LEGISLATIVELY OLDER LABS AND CENTERS? THESE QUESTIONS MAY BE COMPLEX, BUT THEY HAVE NEVER BEEN MORE URGENT, GIVEN THE BLEAK ASSESSMENTS OF THE NATION'S SCHOOLS THAT HAVE BEEN MADE CONTINUOUSLY SINCE THE PUBLICATION OF THE LANDMARK 1983 REPORT A NATION AT RISK.

WE CONTINUE TO EXIST WITHIN AN EDUCATIONAL CRISIS, ONE MARKED BY DECAYING INNER-CITY SCHOOLS, UNACCEPTABLE DROPOUT RATES OF AS MUCH AS FIFTY PERCENT IN OUR MAJOR URBAN CENTERS, AND DECLINING LEVELS OF ACHIEVEMENT, PARTICULARLY WHEN WE COMPARE AMERICAN STUDENTS TO THOSE OF OUR LEADING INDUSTRIAL COMPETITORS. THE COSTS TO SOCIETY ALONE WOULD FORCE US TO COME UP WITH CREATIVE SOLUTIONS TO THE PROBLEMS OF WELL OVER HALF A MILLION DROPOUTS EACH YEAR.

THE SOCIAL COSTS OF ONE DROPOUT IS APPROXIMATELY $4,6000 A YEAR IN HIGHER SOCIAL SPENDING AND LOST TAXES. EACH CLASS THAT DROPS OUT COSTS THE ENTIRE NATION APPROXIMATELY $240 BILLION DOLLARS. WHERE IS THE

FEDERALLY SPONSORED RESEARCH TO OFFER US THE HOPE THAT THIS STATE OF AFFAIRS CAN BE CORRECTED?

IN THE EARLY 1960'S THE PERRY PRE-SCHOOL PROJECT, DEVELOPED IN YPSILANTI, MICHIGAN WITHOUT FEDERAL SUPPORT, SHOWED US THAT BY OFFERING A PRE-SCHOOL PROGRAM TO THREE-YEAR-OLDS FROM POOR HOMES A DIFFERENCE COULD BE MADE. THE CHILDREN WHO WERE PROVIDED WITH THE EXTRA ONE OR TWO YEARS OR EARLY SCHOOLING GRADUATED FROM HIGH SCHOOL AND WENT ON TO JOBS AT TWICE THE RATE OF CHILDREN WHO DID NOT BENEFIT FROM THAT EARLY INTERVENTION. THE CAREFUL WAY THAT LONGITUDINAL STUDY WAS ORGANIZED BUILT UP A POWERFUL MOMENTUM FOR FEDERAL INTERVENTION WHICH HELPED PAVE THE WAY FOR THE HEAD START PROGRAM. IN THESE HEARINGS WE WILL BE ASKING WHERE THE RESEARCH IS THAT CAN EFFECTIVELY DEMONSTRATE TO CONGRESS NEW SOLUTIONS TO EDUCATING DISADVANTAGED CHILDREN.

WHILE THE U.S. SPENDS A LARGER PERCENTAGE OF ITS GNP ON EDUCATION THAN JAPAN, ONLY SEVENTY-THREE PERCENT OF OUR STUDENTS RECEIVE A DIPLOMA, AS OPPOSED TO NINETY-EIGHT PERCENT OF JAPANESE HIGH SCHOOL STUDENTS. CONFRONTED WITH A POSSIBLY SEVERE LABOR SHORTAGE AT THE BEGINNING OF THE NEXT CENTURY, PARTICULARLY OF HIGHLY SKILLED WORKERS, WE FACE MORE THAN JUST HIGHER SOCIAL COSTS IF WE FAIL TO ADDRESS THE PROBLEM OF DISADVANTAGED AND "AT RISK" STUDENTS. OUR CAPACITY TO COMPETE EFFECTIVELY IN THE NEW WORLD ECONOMY IS ALSO JEOPARDIZED, AND SO IS OUR ABILITY TO RETAIN OUR TECHNOLOGICAL EDGE WHEN AMERICAN STUDENTS COME NEAR THE BOTTOM IN INTERNATIONAL COMPARISONS OF SCIENTIFIC ACHIEVEMENT. WE ARE TOLD THAT THE SOVIET'S LAUNCHING OF THE SPUTNIK SATELLITE IN THE 1950'S JOLTED AMERICAN SCIENTIFIC EDUCATION INTO RAPID AND INNOVATIVE CURRICULUM DEVELOPMENT. WHAT HAS OERI DONE TO STIMULATE THE NEW KINDS OF CURRICULUM DEVELOPMENT THAT MUST TAKE PLACE, GIVEN THE DISTURBING

CONCLUSIONS OF THE INTERNATIONAL EDUCATION ASSOCIATION (IEA) WHOSE CHAIRMAN WILL TESTIFY THIS MORNING?

THE UNITED STATES RANKS FORTY-NINTH AMONG ONE HUNDRED EIGHTEEN NATIONS IN LITERACY LEVELS. TWENTY-FIVE MILLION AMERICAN ADULTS CANNOT READ THE HEADLINES OF A DAILY NEWSPAPER. FIFTEEN PERCENT OF RECENT GRADUATES READ AT LESS THAN A SIXTH GRADE LEVEL. ONE MILLION TEENAGERS BETWEEN AGES TWELVE AND SEVENTEEN CANNOT READ ABOVE THE THIRD GRADE LEVEL. IN THIS CONTEXT, IT IS NECESSARY TO WONDER WHAT RESEARCH DATA INFORMED SECRETARY BENNETT'S DECISION TO CUT NEARLY $17 MILLION DOLLARS IN FUNDING FOR THE LITERACY TRAINING FOR HOMELESS ADULTS AND WORKPLACE LITERACY PARTNERSHIPS PROJECT IN NEXT YEAR'S FY '89 BUDGET PROPOSALS. IT IS A NATIONAL SCANDAL THAT A SOCIETY THAT PURPORTS TO CALL ITSELF COMMITTED TO EQUAL EDUCATION CANNOT TEACH ALL OF ITS CITIZENS TO READ AND WRITE.

IN THESE HEARINGS, WE MUST QUESTION THE ADMINISTRATION'S COMMITMENT IN SO MANY OF THESE AREAS TO RESEARCH DESIGNED TO HELP EDUCATE ALL OF THE NATION'S CHILDREN. THE DEPARTMENT'S VIEW OF EDUCATION RESEARCH APPEARS TO BE, UNFORTUNATELY, YET ANOTHER ADMINISTRATION EFFORT TO ALLOW FORM TO TRIUMPH OVER SUBSTANCE. INSTEAD OF ACTING WITH THE KIND OF URGENCY IT SHOULD ON SOME OF THE KEY EDUCATIONAL PRIORITIES EVIDENT TO MOST AMERICANS, SUCH AS THE NEEDS OF "AT RISK" CHILDREN, THE PROBLEMS OF ILLITERACY AND SCIENCE EDUCATION, OERI'S POLICIES HAVE MADE IT MORE DIFFICULT TO ATTRACT THE KINDS OF RESOURCES NECESSARY TO TACKLE THE REAL JOB AT HAND.

THE RECORD OF THIS ADMINISTRATION IN THE YEARS BEFORE THE ASSISTANT SECRETARY TOOK OFFICE HAS BEEN WELL DOCUMENTED BY A RECENT GAO REPORT, EDUCATION INFORMATION: CHANGES IN FUNDS AND PRIORITIES HAVE AFFECTED

PRODUCTION QUALITY. THE AUTHOR OF THAT DOCUMENT WILL BE TESTIFYING BEFORE US TODAY. AS THAT REPORT MAKES CLEAR, SHIFTS AWAY FROM BASIC RESEARCH GATHERING BETWEEN 1980 AND 1985 TOWARDS DISSEMINATION HAVE WORKED TO UNDERMINE THE RESEARCH ENTERPRISE ACROSS THE ENTIRE DEPARTMENT OF EDUCATION.

IN THE AREA OF SPECIAL POPULATIONS, READING AND WRITING INFORMATION GATHERING DROPPED DRAMATICALLY. FOR EXAMPLE, IN 1980 THERE WERE FORTY AREA STUDIES COMMISSIONED IN THE AREA OF READING AND WRITING; IN 1985 THERE WERE TWO.

INSTEAD OF HELPING TO COALESCE AND COORDINATE AN ALREADY FRAGMENTED SYSTEM OF LABS AND CENTERS IN ADDITION TO DISSEMINATION AGENCIES SUCH AS ERIC, THE ADMINISTRATION HAS SOUGHT TO FRAGMENT THE SYSTEM EVEN FURTHER BY FUNDING AN ENTIRELY NEW SERIES OF "MINI-CENTERS." USING SOME DOUBTFUL LEGISLATIVE AUTHORITY, FOUR AWARDS HAVE BEEN MADE FOR STUDIES IN THE CONTENT AREAS. THEIR RATIONALE MUST BE QUESTIONED WHEN WE NOW HAVE TWO DIFFERENT CENTERS STUDYING THE ELEMENTARY SCHOOL, ONE MAJOR CENTER AT JOHNS HOPKINS UNIVERSITY IN BALTIMORE STUDYING EFFECTIVE ELEMENTARY SCHOOLS AND A NEW "MINI-CENTER" DEVOTED TO ELEMENTARY SCHOOLS SUBJECT AREAS AT MICHIGAN STATE UNIVERSITY IN EAST LANSING. DUE TO CONGRESSIONAL PRESSURE THE ADMINISTRATION WAS PREVENTED FROM DEFUNDING EVEN FURTHER AN EXISTING SYSTEM OF SIXTEEN ERIC CLEARINGHOUSES, IN AN EFFORT TO DEVELOP SOME NOT VERY WELL THOUGHT OUT NEW PROPOSALS.

IN HIS LAST YEAR IN OFFICE, THE ASSISTANT SECRETARY HAS BEEN CONVINCED OF THE NEED TO ADDRESS THE PROBLEM OF THE DISADVANTAGED, FROM THE SAFETY OF FISCAL YEAR 1989. YET THE PROPOSED "MINI-CENTER" CONTINUES TO REFLECT THIS ADMINISTRATION'S LACK OF UNDERSTANDING AND BASIC INSENSITIVITY TO MINORITY ISSUES. OERI HAS SOUGHT TO DAMAGE THE

CREDIBILITY OF THE PROJECT FROM ITS INCEPTION BY INCORPORATING WITHIN THE PARAMETERS FOR STUDY, BILINGUAL RESEARCH. THIS FIELD OF INQUIRY REQUIRES SEPARATE INSTITUTION STAFF AND RESOURCES. CONGRESS MANDATED SUCH A SPECIAL EMPHASIS UNDER TITLE VII OF THE ELEMENTARY AND SECONDARY SCHOOL ACT FOR BILINGUAL EDUCATION. IN AN EFFORT TO CIRCUMVENT THE WILL OF CONGRESS, THE ADMINISTRATION IS IN THE PROCESS OF TERMINATING A KEY BILINGUAL EDUCATION CENTER AND TRANSFERRING ITS FUNCTIONS TO THE PROPOSED CENTER ON THE DISADVANTAGED. NEARLY AS OUTRAGEOUS IS THE ASSISTANT SECRETARY'S OMISSION OF LEADING MINORITY RESEARCHERS IN HELPING TO FRAME THE NATURE OF THE CENTERS' MISSION.

WHAT CAN BE DONE TO CHANGE THIS STATE OF AFFAIRS? WE NEED TO USE THESE HEARINGS TO CAREFULLY EXAMINE HOW WE MAKE THE EXISTING STRUCTURE INSIDE OERI AND THE NETWORK OF LABS AND CENTERS MORE RESPONSIVE TO NATIONAL PRIORITIES. FROM A ROUGH SAMPLING OF THE WORK PRODUCED FROM THE LABS AND CENTERS IT IS CLEAR THAT THE EXTREMELY MINIMAL EFFORTS BEING CARRIED OUT TO IMPROVE THE EDUCATIONAL EXPERIENCE OF "AT RISK" AND DISADVANTAGED YOUTH ARE INSUFFICIENT. ONE "MINI-CENTER" DEVOTED TO THIS ISSUE IS NOT ENOUGH; WE NEED AT LEAST ONE MAJOR RESEARCH INSTITUTE WORKING WITH A MANHATTAN-PROJECT LIKE INTENSITY TO DEVELOP SOLUTIONS FOR PERSISTENT UNDERACHIEVEMENT.

AN ATTEMPT SHOULD BE MADE AT A FULLY INTERDISCIPLINARY APPROACH. USING THE BEST RESEARCHERS FROM THE FIELDS OF SOCIAL SCIENCES, HEALTH, AND COGNITIVE PSYCHOLOGY, WORKING TOGETHER WITH EDUCATIONAL RESEARCHERS AND PRACTITIONERS WHO HAVE KNOWLEDGE OF THE REALITY OF URBAN SCHOOLS, WE CAN FIND THE KINDS OF TEACHERS, SCHOOL LEADERSHIP, COMMUNITY INVOLVEMENT AND CURRICULA THAT ACCOMPLISH MEANINGFUL RESULTS.

MECHANISMS ALSO NEED TO BE DEVELOPED WHEREBY WE CAN LEVERAGE THE

MORE SIGNIFICANT RESOURCES SUCH A RENEWED EFFORT WILL CONSUME. WE SHOULD LOOK AT THE KINDS OF PUBLIC-PRIVATE PARTNERSHIPS THAT A RESEARCH AGENCY SUCH AS THE MANPOWER DEMONSTRATION RESEARCH CORPORATION (MDRC) EXEMPLIFIES.

MDRC PRODUCES UNDER CONTRACT WITH THE FEDERAL GOVERNMENT CAREFULLY EVALUATED STUDIES WHICH, LIKE THE PERRY PRE-SCHOOL PROJECT REFERRED TO EARLIER, HAVE THE CAPACITY TO EFFECT REAL AND POSITIVE CHANGES IN PUBLIC POLICY.

MDRC MAY NOT BE THE ONLY MODEL OF SUCH PARTNERSHIPS THAT MIGHT BE DEVELOPED. WHAT WE NEED ABOVE ALL IS THE COMMITMENT TO INVOLVE ALL SECTORS OF SOCIETY IN THE VITAL RESEARCH ENTERPRISE AND HELP TO COORDINATE THEIR EFFORTS; WE NEED, FOR EXAMPLE, EDUCATIONAL RESEARCHERS BETWEEN PUBLIC SCHOOLS AND BUSINESS SUCH AS THE BOSTON COMPACT. SUCH PARTNERSHIPS NEED TO BE INCORPORATED WITHIN AN EXPANDED VISION OF THE ROLE OF RESEARCH AND DEVELOPMENT.

IN SHORT, WE NEED LEADERSHIP. THE NEXT ADMINISTRATION, WHATEVER ITS POLITICAL PERSUASION, WILL UNDOUBTEDLY WANT TO MAKE EDUCATION "A PRIORITY." SUCH A POLICY WILL BE IN ACCORD WITH PUBLIC OPINION SURVEYS WHICH SHOW THAT THE AMERICAN PEOPLE RANK SPENDING ON EDUCATION ABOVE POURING MONEY INTO THE BOTTOMLESS DEFENSE BUDGET. IT IS ALSO CONSISTENT WITH THE RECOMMENDATIONS OF A WHOLE HOST OF BLUE RIBBON COMMISSIONS WHICH HAVE COMMENTED ON THE CURRENT CRISIS. WITHOUT EXCEPTION, THESE COMMISSION REPORTS HAVE ADVOCATED INCREASED FEDERAL SPENDING ON THE NATION'S PUBLIC SCHOOLS. HOWEVER, UNLESS WE HAVE THE KINDS OF RESEARCH NECESSARY TO SHOW HOW TO EFFECTIVELY SPEND THE MONEY THAT WILL UNDOUBTEDLY FOLLOW FROM THE WAVE OF RHETORIC, WE MAY WELL FIND OURSELVES NO BETTER OFF.

THE KEY TO OUR FUTURE PRODUCTIVITY AND SURVIVAL AS A NATION RESTS ON EDUCATION AND THERE CAN BE NO BETTER INVESTMENT IN THAT FUTURE THAN EDUCATIONAL RESEARCH. IT IS TO THIS SIMPLE PROPOSITION THAT THESE HEARINGS ARE DEDICATED.

Mr. OWENS. To begin, we have on panel one: Mr. Charles Wallgren, the executive vice president of High/Scope Educational Research Foundation; Dr. James Hyman, the vice president of Manpower Demonstration Research Corp.; Dr. Richard Rowberg, Chief, Science Policy Research Division of the Congressional Research Service, and with Dr. Richard Rowberg will be Dr. Michael Kaplan, Director, Basic Research, U.S. Army Research Institute.

We would like to begin with you, Mr. Wallgren.

STATEMENT OF CHARLES WALLGREN, EXECUTIVE VICE PRESIDENT, HIGH/SCOPE EDUCATIONAL RESEARCH FOUNDATION

Mr. WALLGREN. Good morning. I am Charles Wallgren, executive vice president of the High/Scope Educational Research Foundation, an independent nonprofit research, development, and training organization with headquarters in Ypsilanti, MI. I have served as an administrative officer at High/Scope since 1972.

The foundation's principal goals are to promote the development of children from infancy through adolescence and to support teachers and parents as they help children learn and grow. The foundation conducts national and international projects in research and program development, training, publishing, public outreach, with funding support from governmental, private, and internally generated sources.

The High/Scope Foundation is most widely known for the Perry Preschool Project, a continuing 26-year study that has documented the lasting benefits of high-quality preschool programs for children who live in poverty. The roots of the foundation's work, however, can be traced back to 1962, when Dr. David P. Weikart, High/Scope's founder and current chief executive officer, was pivotal in the design and operation of the Perry Preschool Project, which was a program within the Ypsilanti public school system. This project, a forerunner to the national Head Start effort, received national attention when Robert Egbert, director of HEW's follow-through program, invited Dr. Weikart to extend the Perry curriculum into the early elementary grades for demonstration purposes in the national follow-through effort which began in 1968.

Shortly thereafter, he was also invited by the office of child development to demonstrate the Perry preschool curriculum in the Planned Variation Head Start project.

Since that time, the foundation has performed research work for our Government on such projects as the national homestart evaluation, project developmental continuity, and program elements of the Perry study.

We have also conducted research efforts sponsored by private institutions such as Carnegie Corporation in New York, Ford Foundation, the Spencer Foundation, and the Skillman Foundation.

As you can see, High/Scope is an independent nonprofit institution that emerged out of local public need. We have been encouraged and allowed to conduct our research to fulfill our goals with program support from both the Federal and private sectors of this country.

My testimony addresses the organizational issues that an organization like High/Scope experiences in conducting long-term research efforts. It will focus on those elements that I believe have been essential in the success of High/Scope's work. I also hope to point out the pitfalls that face longitudinal research projects and to offer this committee some practical advice as to how they can assist in determining the course of future Federally supported educational research.

Longitudinal research is difficult to accomplish in education. The social issues that drive the questions for study are often transitory in nature. Issues of great importance at one point in time become less relevant as new forces converge to bring new problems or opportunities to the fore.

In addition to social issues, of course, there are many operational questions: How does a project maintain funding over many years when most Government and private grounds fund in 1- or 3-year cycles, when matching support is required or when no or limited overhead is allowed? With funding uncertain, how does a project attract, challenge, and keep talented staff? Where do you find key staff for a project that are willing to stay and maintain the work over a period of years? Finally, how does an institution organize itself to allow the work to continue and to see that the mission is achieved?

Perhaps High/Scope Foundation Ypsilanti Perry Preschool Project best illustrates these issues over time and indicates the potential value of solving these problems. Begun in 1962, poor 3- and 4-year-olds were randomly assigned either to a group that attended the preschool program at Perry elementary school or to a group that did not. The project demonstrated that high-quality early childhood education helps children become successful adults.

The leap from a narrow research project asking questions about the impact of early education on the lives of young children to a project useful in public policy formation was a long process.

The first stage in the cycle must be a tightly controlled study adhering closely to experimental design. The purpose of the program should be viewed as experimental and the specific outcomes of the work truly unknown. The next stage calls for developing training materials and methods if the experiment works.

In the third phase, the developed educational program is demonstrated in a stetting that approximates a regular field operation. The fourth stage is a limited field test under natural circumstances. In the fifth stage, the education program is ready for dissemination to many sites. Finally, in the sixth stage, the project is ready to work with Federal, State, and corporate decisionmakers supporting the development of public policy recommendations and decisions.

The sixth stages represent a multiyear sequence, not a means of providing information quickly for policy decisions.

Perhaps only a few projects have ever operated so comprehensively and had such an impact as the Perry Preschool Project. The accident of history that allowed all the pieces to fit together occurs rarely in most settings, least of all in education. However, one could ask is it the social drive of the 1960's that has allowed us to work on this effort for the past 26 years, or have other social issues entered the picture? If you look closely at today's Federal legislation for early childhood programs, you will notice the inclusion of daycare provisions. In fact, the daycare need is probably the driving social force at the moment for early childhood programs at least equal to the issue of improving the educational and social performance of disadvantaged children.

In this case, both forces can be served by the Perry data, a situation that helps sustain our work. Yet, if researchers have to identify an issue to study that must be sustained for two and a half decades and predict the social forces that will be in effect when the study and important mechanisms are complete, we would be expecting them to do the impossible.

How does this relate to the Perry study? It is relevant in the sense that we are fortunate that Weikart chose the study he did in the early 1960's and that he had the commitment, vision, and energy to see the work develop over the past 26 years. It was important that he surrounded himself with staff who shared his vision and commitment to see the project through, which allowed others to reap the same benefits as those in the original treatment.

It is equally important that society's interest in preschool didn't take a different direction in those 26 years. High/Scope's success and flourishing is partly due to our personnel policies which provided staff with the opportunity of spending their entire career at High/Scope rather than being hired solely on a project basis. We refused to load our organization with graduate students who would learn more from the experience than what they could contribute to High/Scope's research over a limited period of time. We found that the collective and accumulative knowledge of a staff is critical in achieving success over the long run.

High/Scope was also fortunate to be a nonprofit organization. Tax relief has helped. But even more important has been the fact that we could independently shift our funding targets from governmental to private sources to our own resources and back again as the financing environment changed. To depend upon one funding source for 26 years would not have allowed us to complete the project.

In conclusion, there seem to be two main ingredients in making a major project like the High/Scope Perry Project work. First, it requires a visionary leader willing to devote his life to the task. Second, it needs to identify the resources to maintain the effort. Legislating the qualifications for a social reformer seems out of the question, but legislation that allows these leaders to draw upon Federal resources to accomplish their work is essential.

I would suggest that Federal funding be made available to private organizations like High/Scope based on the merits of their work and ideas. Moreover, this funding should not always be provided for preconceived projects or in restrictive ways such as high matching requirements and preset indirect costs. To realize the visions of the social leader, we need flexible Federal programs that assist them and their staffs in carrying out their work.

I wish to thank this subcommittee for allowing me to share the High/Scope story. I hope it can help in some small way to shape the future.

[The prepared statement of Charles R. Wallgren follows:]

TESTIMONY

Subcommittee on Select Education Oversight Hearing
on the Office of Educational Research and Improvement

Charles R. Wallgren
Executive Vice President
High/Scope Educational Research Foundation
600 North River Street
Ypsilanti, Michigan 48198

Thursday, April 21, 1988

Introduction

Members of Congress and distinguished guests, I am Charles Wallgren, Executive Vice President of High/Scope Educational Research Foundation, an independent, nonprofit research, development, and training organization with headquarters in Ypsilanti, Michigan. I have served as an administrative officer at High/Scope since 1972. The Foundation's principal goals are to promote the development of children from infancy through adolescence and to support teachers and parents as they help children learn and grow. The Foundation conducts national and international projects in research, program development, professional training, publishing, and public outreach, with funding support from governmental, private and internally generated sources.

The High/Scope Foundation is most widely known for the Perry Preschool Project--a continuing, 26-year study that has documented the lasting benefits of high quality preschool programs for children who live in poverty. We have also conducted long-term research on early childhood curriculum approaches. Over the years, our teacher-training efforts have been based on the High/Scope Curriculum, a developmentally appropriate approach that encourages children to initiate their own learning activities. In recent years, our Training of Teacher-Trainers projects throughout the country have enabled trainers to provide High/Scope curriculum training to many early childhood teachers.

History of High/Scope

The High/Scope Foundation was founded in 1970. The roots of the Foundation's work, however, can be traced back to 1962 when Dr. David P. Weikart, High/Scope founder and current Chief Executive Officer, was pivotal in the design and operation of the Perry Preschool Project which was a program within the Ypsilanti Public School system. This project, a forerunner to the National Head Start effort, received national attention and Robert Egbert, Director of HEW's Follow Through Program, invited Dr. Weikart to extend the Perry curriculum into the early elementary grades for demonstration purposes in the National Follow Through effort which began in 1968. Shortly thereafter, he was also invited by the Office of Child Development to demonstrate the Perry Preschool Curriculum in the Planned Variation Head Start Project.

At that point, the various projects in which Dr. Weikart was involved extended far beyond the scope of his responsibility at the Ypsilanti Public Schools. He found himself in a position of having to operate these projects from different institutions, such as Eastern Michigan University and a private company, High/Scope Inc., which he established specifically to operate a summer camp program for gifted and talented teenagers. Upon the advice of professional associates and guidance from the Superintendent of Ypsilanti Public Schools, Dr. Weikart established the High/Scope Educational Research Foundation on July 1, 1970. Since that time, the Foundation has performed research work for our government on such projects as the National Home Start Evaluation, linkages between preschools and elementary schools, in Project Developmental Continuity, studies on handicapped children, and the program elements of the Perry study. We have also conducted research efforts sponsored by private institutions, such as Carnegie Corporation of New York, Ford Foundation, Spencer Foundation, and the Skillman Foundation.

In the words of Gordon Ambach, former New York Commissioner of Education and President of the Council of Chief State School Officers, "There is overwhelming evidence that the research results and publications of the High/Scope Foundation have had a significant part in focusing the attention of educators, policymakers in the government and private sector, and the public at large on the vital importance of investment in early childhood."

As you can see, High/Scope is an independent, nonprofit institution that emerged out of local public need. We have been encouraged and allowed to conduct our research and fulfill our goals with program support from both the federal and private sectors of our country. The establishment of High/Scope was not made to develop and then impose a research program and instructional model on our educational community based on some preconceived notion. Nor was it developed to satisfy some entrepreneurial urge of its founders. However, I must point out that the High/Scope Foundation does have a philosophical position based on developmental theory, which is reflected in all our curriculum development and program training efforts.

My testimony addresses the operational issues that an organization, like High/Scope, experiences in conducting long-term research efforts. It will focus on those elements that I believe have been essential in the success of High/Scope's work. I also hope to point out the pitfalls that face longitudinal research projects and to offer this committee some practical advice as to how they can assist in determining the course of future federally supported educational research.

Longitudinal Research

Longitudinal research is difficult to accomplish in education. The social issues that drive the questions for study are often transitory in nature. Issues of great importance at one point in time become less relevant as new forces converge to bring new problems or opportunities to the fore. For example, the movement to establish vocational education in our public schools in order to solve employment problems has been dampened by corporate America's preferring to do their own specific training. Corporations are seeking candidates who have a good education in the basics. The types of skills corporate America looked for 10 to 20 years ago aren't as important to them today. They can buy those old skills at a cheaper rate from foreign sources.

In addition to social issues, of course, there are many operational questions. How does a project maintain funding over many years when most government and private groups fund in one- or three-year cycles, when matching support is required, or when no or limited overhead is allowed? With funding uncertain, how does the project attract, challenge, and keep talented staff? Where do you find key staff for a project that are willing to stay and maintain the work over a period of years and forego opportunities for personal and financial advancement? Finally, how does an institution organize itself to allow the work to continue and to see that the mission is achieved?

Perhaps High/Scope Foundation's Ypsilanti Perry Preschool Project best illustrates these issues over time and indicates the potential value of solving these problems.

Perry Preschool Project

Interest in evaluating the effects of early childhood education as a means of improving the educational and social performance of disadvantaged youth began to emerge in the early 1960s. The Perry Preschool Project, a program from this period, currently illustrates the benefits of high quality early childhood programs for poor children. Begun in 1962, poor three- and four-year-olds were randomly assigned either to a group that attended the preschool program at Perry Elementary School or to a group that did not. Follow-up on both groups at age nineteen showed that:

In education:

Fewer are classified as mentally retarded (15% vs. 35%)
Fewer are school dropouts (33% vs. 51%)
More attended college or job training programs (38% vs. 21%)
More are literate (61% vs. 38%)

In the world of work:

More hold jobs (50% vs. 32%)

In the community:

Fewer are arrested for criminal acts (31% vs. 51%)
Fewer are on public assistance (18% vs. 32%)

In addition, the teenage women who participated in preschool had a lower birth rate than those who did not (64 children vs. 117 children per 100 women).

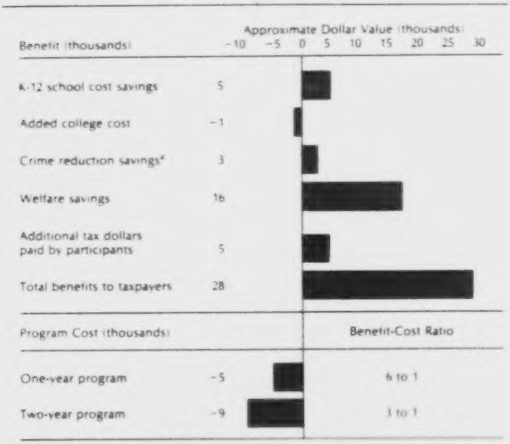
The project demonstrated that high quality early childhood education helps children become successful adults. It also reduces major social and economic problems within a community. Preventing lifelong problems in high-risk children is a better community goal than attempting to correct these problems. While not the only answer, the project documented the idea that high quality early childhood education can be a major tool for society to use in improving the quality of life of the participants and their families as well as the community at large.

In a step unusual for educational projects, a rigorous economic study was undertaken to determine the return on investment in high quality early childhood education. While helping children is worthwhile in itself, benefit cost analyses provide a clear method of comparing various investment opportunities across program options. Analysis of the High/Scope Foundation's Perry Project indicates that such early childhood education programs can be an excellent investment, returning as much as $6 for every dollar invested.

In 1985 the Committee for Economic Development said, "It would be hard to imagine that society could find a higher yield for a dollar of investment than that found in preschool programs for its at-risk children." [1]

Figure 1

PERRY PRESCHOOL PROGRAM PER-CHILD
COSTS AND BENEFITS TO TAXPAYERS



Note. Table entries are constant 1981 dollars, discounted at 3 percent annually. Adapted from John R. Berrueta-Clement, Lawrence J. Schweinhart, W. Steven Barnett, Ann S. Epstein, and David P. Weikart, *Changed Lives: Effects of the Perry Preschool Program on Youths through Age 19*, Monographs of the High/Scope Educational Research Foundation, 8 (Ypsilanti, Mich.: High/Scope Press), 1984, p. 91.

*Savings to citizens as taxpayers and as potential crime victims.

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[1] Committee for Economic Development. (1985.) Investing in Our Children.

The leap from a narrow research project asking questions about the impact of early education on the lives of young children to a project useful in public policy formation was a long process.

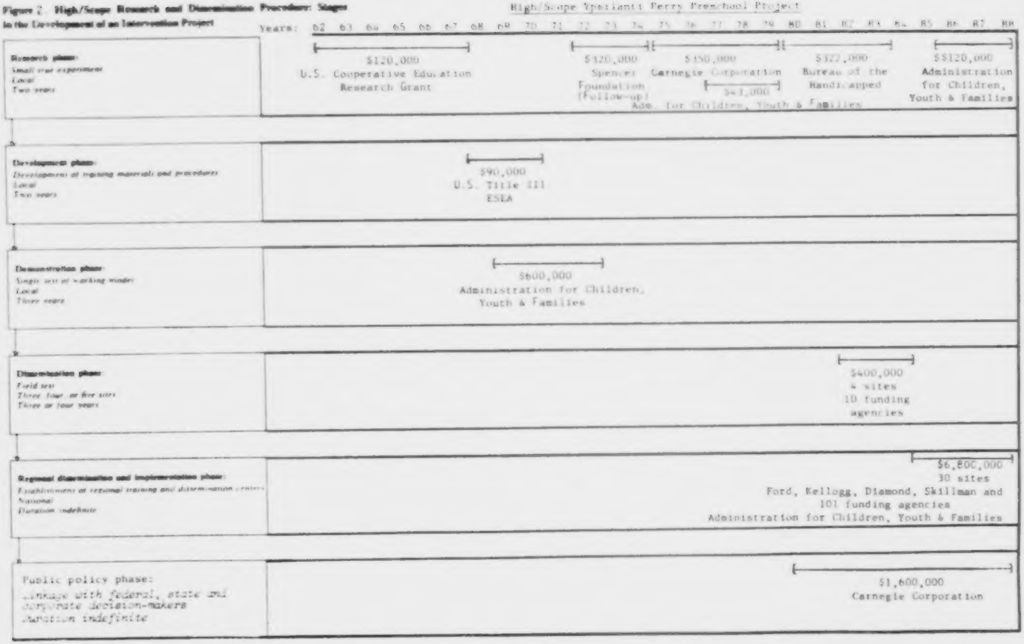
Cycle of Project Development: Research and Policy

The cycle begins with a tightly controlled research project that validates a treatment and moves to the development of training materials, to demonstration and field testing, to the dissemination phase, and finally to a public policy stage. The first stage in the cycle must be a tightly controlled study, adhering closely to true experimental design. The purpose of the program should be viewed as frankly experimental, and the specific outcomes of the work truly unknown.

The next stage calls for developing training materials and methods if the experiment "works." To meet the needs identified in the experimental study, film, videotape, manuals, handbooks, reading lists, and practical systems for gaining experience rapidly may be required. They will be used principally in the third phase to instruct trainees in the program operation. Development of training materials will continue throughout the experiment to meet the needs of different staff and situations, as will development of instruments for measuring outcomes.

In the third phase, the developed educational program is demonstrated in a setting that approximates a regular field operation. In this phase the essential components for effective field operations are developed: the curriculum, the system to deliver it, the training procedures necessary to the program's

Figure 2. High/Scope Research and Dissemination Procedure: Stages in the Development of an Intervention Project



implementation, the staff model to be used, and quality control methods to assure successful field implementation. Within the framework of the original research project, adaptations and improvements are made to build on experience and to meet practical demands, political and otherwise. However, the central focus of the project is retained; the basic design is not changed. In this, the most critical phase, retaining the intent of the original project is very difficult. The special objectives are to test the training systems, to further the development of measurement instruments, and to replicate the design established in the first phase. Evaluation is focused on the program's form in order to develop quality control measures and to link specific procedures with desired outcomes.

The fourth stage is a limited field test under natural circumstances. The number of sites is held down so that effective control will not be lost. The quality control procedures are primarily designed to produce monitoring information and to indicate comparability with the original study and demonstration project. The original sponsor usually remains active in this stage.

In the fifth stage, the education program is ready for dissemination to many sites. The curriculum, training program, delivery system, staff model, and quality control procedures are clearly known and available. Research on the effect on differing populations and under differing circumstances may continue, but the basic program is well-documented and capable of achieving the intended results. Both sponsorship and the number of programs are broadened at this stage.

Finally, in the sixth stage the project is ready to work with federal, state, and corporate decision-makers to support the development of public policy recommendations and decisions. Given the diffusion of decision-making in our country, this means that the project staff must reach out to a wide range of agencies, national associations, and levels of government.

The six stages represent a multi-year sequence--not a means of providing information quickly for policy decisions--whose goal is the effective delivery of a valid educational program with the ability to consistently obtain the desired results across a wide geographical area. The process starts with an experimental hypothesis, is validated and tested at each level, until finally "going to scale" after many years of work.

Perhaps only a few projects have ever operated so comprehensively and have had such an impact as the Perry Preschool project. The accident of history that allowed all the pieces to fit together occurs rarely in most settings, least of all in education. Several important lessons can be extracted from the success of the Perry Preschool Project.

First, the initial research was done in such a way as to satisfy generally accepted and rigorous scientific criteria. Too often, studies in education are compromised from the outset by various adaptations that undermine the overall results to the point of defeating the purpose of the entire project. Perhaps because of its limited goals and local focus, the Perry Preschool Project resolved that problem.

Second, the project was operated well enough to give a clear set of findings, all consistently positive. In addition, the findings were drawn not from psychological or education variables, but from the real world concerns of the general public, such as jobs, welfare, crime, teenage pregnancy, and education participation.

Third, it was recognized early in 1970 that the real importance of data from this project was actually not in the internal relationships of the data, but in how the data are applied to the early childhood education public policy debate, particularly the economic findings. This transmission of useful and pertinent information has opened the door for corporate decision-makers and government officials to become involved in supporting early childhood education.

However, one could ask, is it the social drive of the 1960s that has allowed us to work on this effort for the past 26 years or have other social issues entered the picture? If you look closely at today's federal legislation for early childhood programs, you will notice the inclusion of daycare provisions. In fact, the daycare need is probably the driving social force at the moment for early childhood programs, at least equal to the issue of improving the educational and social performance of disadvantaged children. In this case, both forces can be served by the Perry data--a situation that has helped sustain our work. In general, it seems that social need is what drives societal change and not research data by itself.

Now, if this principle is understood to mean that researchers have to identify an issue to study that can be sustained for two and one-half decades, and predict the social forces that will be in effect when the study and support mechanisms are complete, then we would be expecting the impossible. How does this relate to the Perry Study? It is relevant in the sense that we are fortunate that David Weikart chose the study he did in the early 1960s and that he had the commitment, vision, and energy to see the work develop over the past 26 years. It was important that he surrounded himself with staff who shared his vision and commitment to see the project through the research, the development, the demonstration, the dissemination, the implementation, and the public policy phases, which allowed others to reap the same benefits as those in the original treatment group.

High/Scope's success in surviving and flourishing is partly due to our personnel policies which provided staff with the opportunity of spending their entire career at High/Scope rather than being hired solely on a project basis. We refused to load our organization with graduate students who would learn more from the experience than what they could contribute to High/Scope research over a limited period of time. We found that the collective and accumulative knowledge of a staff is critical in achieving success over the long run.

High/Scope was also fortunate to be a non-profit organization. Tax relief has helped, but even more important has been the fact that we could independently shift our funding targets from governmental to private sources to our own resources and back again as the financial environment changed. To depend on one funding source for 26 years would not have allowed us to complete the project.

In conclusion, there seems to be two main ingredients in making a major project like the High/Scope Perry Preschool project work. First, it requires a visionary leader willing to dedicate his life to the task and second, it needs to identify the resources to maintain the effort. Legislating the qualifications for a social reformer seem out of the question, but legislation that allows these leaders to draw upon federal resources to accomplish their work is essential. I would suggest that federal funding be made available to private organizations like High/Scope based on the merits of their work and ideas. Moreover, this funding should not always be provided for pre-conceived projects or in restrictive ways, such as high matching requirements and pre-set indirect cost rates. To realize the visions of the social leader, we need flexible federal programs that assist them and their staffs in carrying out their work.

I wish to thank this Subcommittee for allowing me the opportunity to share the High/Scope story. I hope it can help you in some small way to continue to shape the future of this great country.

Mr. **Owens**. Thank you, Mr. Wallgren. I'm sorry I didn't warn you. There will be a bell ringing after 7 minutes. You are not required to confine yourself to that 7 minutes, but we hope you will round it as soon as possible after that and take no more than 10 minutes.

Dr. Hyman.

STATEMENT OF JAMES HYMAN, VICE PRESIDENT, MANPOWER DEMONSTRATION RESEARCH CORP.

Mr. **Hyman**. Good morning, Mr. Chairman. I am James Hyman, vice president, external affairs, for the Manpower Demonstration Research Corp. We are pleased to be here this morning.

As you may know, MDRC has a 14-year history of researching and evaluating programs geared towards increasing the self-sufficiency of the disadvantaged. In that context, we have focused our efforts mostly on what is called second-chance programs, and as a result have not had any direct involvement with evaluating the Nation's schools. As such, we are very pleased that this Subcommittee would see fit to invite us and find some use in our experiences.

As we talk to our colleagues in education, we have come to believe that any lack of progress in approaching the pressing educational problems in this country is probably not likely the result of a dearth of new ideas, nor is it likely the result of a lack of networks through which new ideas can be disseminated.

Rather, we believe that perhaps the new ideas combined with rigorous research evidence suggesting effectiveness may be the missing link in educational improvement.

As such, my remarks today will suggest that demonstration research combined with rigorous research design may be a useful approach to generating reliable knowledge on which programs and dissemination efforts may be based. When I speak of dissemination, I am using it in a very narrow way. I mean a specific model operated for a specific period of time subject to rigorous analysis over an acceptable follow-up period to determine the impacts of these programs.

The term "demonstration" is not always used in that way. Sometimes it implies no more than the provision of resources to allow for the exploration of different program ideas. In that context, demonstrations are not often highly structured and occasionally lack provision for evaluation altogether.

But in my use of this term, I should say that there are at least four conditions when we think demonstrations are very valuable. One is where the problems are very complex and not amenable to easy solution. The second condition is where the issue is of national scope and therefore has potential for broader legislative initiative. Third is where the need for research children evidence is critical; therefore, research is justified. And fourth is where resources are very limited.

Let me say, too, however, that there is an overriding concern over those four points, and that is whether or not the demonstration promises to yield anything that we can regard as new knowledge. The question of generating new knowledge is going to be largely dependent upon how rigorous the research design to determine whether or not at the end we can say we learned something.

The history of research is really littered with a lot of argument about both findings and their interpretation. The general issue is whether or not the research findings actually captured the unique contribution of the program over what it would have been in its absence.

As an example, if an ad campaign were launched by a major pretzel-making firm and 2,000 persons bought that pretzel a week after that ad campaign was launched, it would be a mistake to assume that the campaign were responsible, since many of the persons who might have purchased that pretzel might have been unexposed to the campaign and there may have been people with brand loyalties who would have purchased it anyway.

We have the same situation in social science research. Estimates of employment figures from employment programs will overstate their impacts because they do not net out what would have happened to certain persons in the absence of their exposure to the program.

What MDRC is trying to do to avoid this pitfall is to engage in experimental design research much like the medical profession does in its research. We assign people at random to an experimental group who will receive the treatment versus a control group that will not. And because we do have a control group that does not receive these services, their activities and behaviors and outcomes give us the reading on what would have happened in the absence of the program, and from that we can net out the program's unique impacts.

We have very reliable evidence ourselves from our own experience that reliable findings can be a catalyst for policy. MDRC has enjoyed a very prominent role in providing information to Congressmen this year in the welfare reform debate. In 1981 the Omnibus Budget Reconciliation Act offered States a new flexibility to change the way they dealt with the work side of the AFDC program. MDRC seized an opportunity at that point to try to structure a demonstration to see whether or not these programs would work and make a difference in the lives of AFDC recipients.

MDRC talked to 33 different States and recruited 8 into its demonstration. Our findings are about complete. We have been disseminating them to policymakers here and in other States around the country. And we have out that there is a very consistent story being told so far:

One is that it is feasible to operate these programs;

Second, that these programs are not punitive on the one hand, they don't impart skills on the other;

Third is that they are positive with modest impacts on their employment earnings;

And fourth is that these programs are cost beneficial for States to operate.

These findings have been extremely well received by persons here on the Hill, in the Administration, among advocates, national organizations, and the press, and we believe there are really three reasons:

The first is that they are reliable. The methodologies used to generate these findings are not subject to debate over whether or not they are accurate and how we interpret them. The debate over our findings is not how to interpret them but how to apply them.

Second, we think we receive high marks on the objectivity with which these findings are reported.

Third, I think the timing of these findings is clearly at issue. These findings come forward at a time when the Congress is very interested in looking at the welfare system. But I would submit that the timing is not a crucial factor. This timing would not have made a difference or the findings less reliable.

I would like to share with you what I think are some parameters that one might think about in doing demonstrations and go on from there to suggest whether or not these kinds of things are applicable in education.

First, of all, it seems to us that demonstrations must be based on very thorough investigation of major causes of the problem if the demonstration or intervention is to have any hope at all of ameliorating the difficulty.

Second, we think that the demonstration must embody clearly testable propositions clearly articulated so that we know when we're going in what questions we are asking and know at the outset how to monitor the research to make sure that those questions are not obscured in the process.

Third, we think the demonstration must be practical. The first issue is whether any institutions or providers can be convinced to run the thing. Too ambitious an intervention may inhibit institutions or make them unable to run various demonstration programs without massive new dollars. In addition, very ambitious demonstration approaches may require lengthy and expensive startup times.

I am going to abbreviate these remarks. You will find them in my written testimony. I do want to go on to say that there are a number of other parameters here, that careful site selection gets to be important. We don't want to deal with anomalous populations and anomalous circumstances. We need technical assistance to make sure that the model is preserved intact. Monitoring is necessary to preserve the integrity of the research design.

And the question that you would ask us in all of this is whether or not it takes new entities to do this. I don't think we know that. I don't think we're an appropriate judge of that. But we can state a number of roles that we think are important that we have played that I think go beyond the normal course of education research. They are as follows:

We have done exploratory research to define the problem. We have actually designed programs. We have brokered those program ideas to communities, providers, and funders to package the demonstration. We have had to deliver technical assistance to ensure that operators were up to the rigors of the model and that the components of the model were going to be implemented successfully.

We have had to manage the demonstration and the research to make sure that the model and the research design had integrity. We have collected and monitored the data, have performed the analysis, produced the reports, findings, and recommendations, and mounted aggressive dissemination programs both here on the Hill, with the administration, and throughout the States that broker these notions.

Applicability to education is a major question. We have, as I said before, mostly researched second-chance programs. On the whole, they have been embodied in fairly simple bureaucratic structures. They have had limited objectives, focusing on employment and earnings of welfare and other dependent individuals. They have also been short treatment. Education on the other hand is a complex enterprise with a variety of actors offering complex treatments with a variety of goals over a longer period of time than any other social service provided in this country.

In addition, there is debate in education as to whether intervention is the way to go. Many education researchers argue in favor of systemic form rather than add-on programs. Education reform tends to be highly process-oriented and as such will likely touch all participants. Since a basic tenet of experimental research is being able to withhold something from a control group, process research is very difficult using educational design because of the potential for what we call contamination effects.

I should add also that the random assignment technique we use is a very difficult one at times because it poses ethical issues about withholding services. In most of the programs we have studied, because they weren't fully funded, most of the persons eligible were not able to be served. So, random assignment was sort of a fair lottery system that really did not withhold services but rather shuffled the deck.

In compulsory fully funded education, this is a different situation.

Mr. **Owens**. I am smiling because the paucity of resources is such that no ethical issue is there except the ethical issue of the failure of the Government to appropriate enough money to serve everybody in the beginning. We have had such a paucity of resources, so I don't think you have had a great deal of decisionmaking about that. So much has been withheld by Government.

Mr. **Hyman**. I would agree.

But random assignment in education poses some difficulties. It may be a case where random assignment is applicable in only a limited set of circumstances, circumstances where you are featuring intervention approaches which target specific populations.

Even with that, there is a potential for a vast array of very important questions to be answered using this technique.

I should also say that in education you should expect to find longer followup periods for research, depending upon whether an intervention is designed for elementary, junior, and senior high school, and it may be somewhat more expensive.

But I do believe that demonstration research can be a viable tool in these contexts. In other contexts, I think researchers can make judgments about the extent to which other methodologies will sacrifice some precision and whether even with that sacrifice of precision the method can advance the cause of knowledge in these programs sufficiently to make it worthwhile.

My feeling is demonstration research allows for the formulation of policy and programs on the basis that the approach is proven effective as opposed to on the basis of good ideas merely thought to be good ideas.

Thank you, Mr. Chairman.

[The prepared statement of James B. Hyman follows:]

TESTIMONY OF

JAMES B. HYMAN

VICE PRESIDENT OF EXTERNAL AFFAIRS

MANPOWER DEMONSTRATION RESEARCH CORPORATION

before the

SUBCOMMITTEE ON SELECT EDUCATION

of the

HOUSE OF REPRESENTATIVES

April 21, 1988

Good morning. I am James Hyman, Vice President of External Affairs for the Manpower Demonstration Research Corporation (MDRC) in New York. On behalf of the Corporation, I would like to express our thanks to Chairman Owens and the members of this subcommittee for inviting MDRC to testify in these proceedings. As you may know, MDRC has had a 14-year history of research and evaluation aimed at assessing the effectiveness of programs geared toward increasing the self-sufficiency of the disadvantaged. In this context, our research has focused primarily on "second-chance" programs and on certain adaptations of employment and training programs. As such, the Corporation has not been directly involved in evaluations of the nation's school systems. Given this perspective, we are particularly pleased that the subcommittee is interested in MDRC's experience, and we are hopeful that you will find this experience useful to your deliberations.

As we at MDRC have consulted with research colleagues in education, we have come to suspect that any lack of progress in addressing the nation's pressing educational issues probably does not result from a lack of good ideas. Nor does it likely result from a lack of networks through which good ideas can be disseminated. Rather, it may be a matter of overcoming inertia and of building momentum for change. It may be that good ideas combined with reliable evidence of effectiveness is the missing link in educational improvement.

This theme will guide my remarks today. I will argue, from MDRC's perspective, that demonstration research supported by rigorous research designs may offer a useful approach to the generation of reliable knowledge upon which policies and programs can be based and on which dissemination and replication efforts can be founded. The prominence of MDRC's research in the current welfare reform debate will serve as a useful example. In my remarks, I will also attempt to: clarify what we mean by the term demonstration, its purpose and when it may be useful; discuss several important considerations and trade-offs involved in the design and implementation of demonstrations; and present some issues and cautions about their application in education.

MDRC is a relatively young organization. It was established in 1974 by the Ford Foundation and several federal agencies for the expressed purpose of managing an innovative research and demonstration program--the National Supported Work Demonstration. Since that time, the scope of the Corporation has greatly widened from its original focus on the demonstration and evaluation of discrete program initiatives like Supported Work, to the evaluation of major service systems such as the Job Training Partnership Act (JTPA) and California's new welfare program, Greater Avenues for Independence (GAIN). Throughout the Corporation's history, the focus has been on the deliberate generation of knowledge through the testing of alternative interventions for specific national social problems.

The Utility of Demonstrations and the Importance of Rigorous Research

As we focus today on the federal research agenda in education, our experience suggests that the use of demonstration research may offer a promising approach to addressing many of the nation's pressing educational problems. A program of carefully managed research demonstrations could allow policymakers to evaluate the feasibility of proposed programs and their short- and long-term effectiveness. In suggesting this approach, I take great care in the use of the term demonstration. By demonstration I refer to a specific program model that is operated for a specified duration and subjected to rigorous evaluation to determine over some acceptable follow-up period, the impacts it has had on its participants. Many "demonstrations" financed by the federal government, particularly in education, are not conceived in these terms. Often they are not highly structured and lack any provision for evaluation. So I draw a distinction between my use of the term and its use in other contexts where it implies only the provision of funds to allow the exploration and operation of different program approaches. As I have defined it, the demonstration approach has proven especially useful when four conditions prevail:

- First, where the problems to be addressed are complex and not amenable to easy solution;
- Second, where the problem is national in scope and therefore has potential to be addressed by broader program legislation;
- Third, where the need for information is critical and therefore research justified; and
- Fourth, where only limited resources are available.

But, the overriding consideration is whether something can be learned from the demonstration--particularly whether the intervention made any difference. Demonstrations are launched principally for their knowledge value and whether or not knowledge will be advanced by a demonstration depends critically on the extent to which rigorous research can be performed.

The history of research is littered with arguments over the meaning and interpretation of findings. Flaws in research designs have often elicited controversy over the numbers generated and over what gave rise to them. The controversy most often revolves around whether or not the research results measure the unique impact of the program above and beyond what might have happened in its absence. For example, if 2,000 people were to buy a particular brand of pretzel the week following a new ad campaign, it would be incorrect to assume that the campaign was responsible, since many people may have purchased the pretzel without being exposed and others may have bought it regardless. The same problem exists in research on social programs. For example, outcome data from employment programs will overstate their impacts because the data cannot "net out" participants who would have gotten jobs on their own.

MDRC has sought to avoid this pitfall by making extensive use of experimental design research wherein persons eligible for the intervention are randomly assigned into either an experimental group that will receive the treatment or into a control group that will not. Random assignment offers a greater degree of assurance than other methods, that, on the whole, persons treated and persons not treated will not differ in their overall characteristics. The control group then yields a measure of what would have happened in the absence of treatment and allows us to "net out" the unique effects of the intervention.

MDRC's use of rigorous research methods employing random assignment has changed the nature of the debate from how to interpret findings to how best to apply them. Indeed, producing reliable findings can greatly influence the advance of policies and programs. MDRC's work in the welfare area is a pointed example.

Reliable Findings: A Catalyst for Policy

Responding to the passage of the Omnibus Budget Reconciliation Act (OBRA) of 1981 which offered states a range of options for restructuring the work side of the nation's AFDC program, MDRC seized an important opportunity to test the impact and cost effectiveness of different and highly controversial welfare reform approaches. This demonstration posed interesting new challenges for the Corporation. Because it was not a federal demonstration, MDRC as an evaluator would not be providing the funds to operators for the implementation of a particular approach to be tested. Instead, the programs tested were those that states actually chose to implement. As a consequence, the treatments in this demonstration varied with local political and other considerations. The programs tested then, rather than representing only one model, represented a range of approaches that were expected to be significant and representative of the variation in programmatic strategies, economic conditions, target populations and program designs across the nation. The funding of the research was also atypical. MDRC received a challenge grant from the Ford Foundation under which a state could be added to the study only if half the necessary research funds could be raised either from the state or another foundation.

Given the non-uniformity of the treatments and this unusual funding structure, it was clear that MDRC's demonstration would not be a single experiment but rather a series of parallel tests which MDRC would structure similarly to assure some cross-state comparisons. In actuality, each consisted of a freestanding evaluation of a state project. Eight states and over 35,000 individuals were involved in the research.

What has emerged from these studies is a fairly consistent story suggesting that: it is feasible to require AFDC recipients to participate in work-related activity as a condition of welfare receipt; that, in general, the work programs designed in these states were not punitive, though they did not tend to build skills; that, in general, these programs had positive impacts, although modest, on the employment and earnings of participants; and that they were cost-effective.

This research has been well received and sought after by members of the press, of the Congress, and by Congressional staffers, heads of national associations and advocacy groups. Two factors are responsible--the reliability of the findings as earlier discussed and the objectivity with which they are reported. Though the timeliness of the issue was also a factor, timing would not have mattered if the findings were not credible.

The Design and Implementation of Demonstrations: Some Considerations

Demonstration research must be carefully designed and intensively monitored by the researcher in order to assure that something is learned and, as importantly, that what is learned is important and of value. The following are some considerations on the design and implementation of demonstrations. This series of issues is not intended to be a comprehensive list nor does it pretend to treat these issues in sufficient depth. Rather, it is offered as a means of highlighting some of the considerations, trade-offs and judgements that must be made in designing demonstration research.

- Demonstrations should be based on the best evidence available about the nature and causes of the problem if an intervention is to produce the desired outcomes.

MDRC's current JOBSTART demonstration for dropout youth stems from an hypothesis generated by an extensive literature review and prior experience with youth programming. While the literature showed mixed results, several findings seemed clear: that programs providing only work experience, and short-term interventions, offering primarily job search and other placement assistance, were insufficient to improving the long-term employability and earnings of severely disadvantaged youth. The Job Corps, a residential program providing intensive services including education and occupational skills training, was the only program for which credible evidence existed that suggested positive impacts. Yet, the Job Corps model is a very expensive one with an estimated cost of approximately $5,700 in 1977 terms (or approximately $10,500 in current dollars) per participant over the average six-month participation period. These findings led MDRC to test whether an intensive services model offered on a non-residential basis, and therefore less expensive than the Job Corps, could also be effective.

- Demonstrations should contain clearly specifiable and testable propositions.

The Supported Work Demonstration, operated in 15 localities with over 10,000 participants, was an effort to demonstrate whether a work program, which gradually increased the rigor of its work requirements and its expectations for participants, could increase the employability and earnings of members of our society felt to be the most severely disadvantaged--long-term welfare recipients, ex-offenders, ex-addicts and unemployed dropout youth.

The Youth Incentive Entitlement Pilot Projects (YIEPP) operated between 1978 and 1980 were one of the nation's most ambitious attempts to intervene in the employment and schooling behavior of disadvantaged youth and tested whether the promise of guaranteed employment would increase the youths' enrollment and rates of employment and lessen the dropout rate. As many as 76,000 low-income teenagers in 17 localities were employed by over 10,000 work sponsors during this demonstration.

Our current demonstration, JOBSTART, which is operating in 13 communities, involves over 2,300 individuals in a test of whether a program model combining instruction in basic skills with occupational skills training, support services and job placement assistance can effectively increase the employment and earnings and decrease the long-term joblessness of severely disadvantaged youth dropouts--a group on which YIEPP and Supported Work had little effect.

Other MDRC interventions have been devised to address the problems faced by school-aged pregnant and parenting teens. Project Redirection, operated from 1980 to 1985, involved a total of 11 sites and over 1,300 participants. The program provided guidance to pregnant and parenting teens both through mentorship arrangements and through program staff. It encouraged them to take advantage of a variety of community services, from health care and family planning to education and employability development, in accordance with individual participation plans developed in the program.

New Chance is a current MDRC pilot program which in part is an outgrowth of our Project Redirection experience. New Chance focuses on an older population of young mothers (aged 17 to 21) and is more geared toward helping participants enter employment as opposed to the focus in Redirection on completing education. It offers a structured sequence of services to provide an intensive exposure over a period of 18 to 24 months. The objective in both interventions was to test approaches which would prove effective in breaking the cycle of long-term dependency.

- The intervention must be designed so as to be practicable.

Since the expected yield from a demonstration is knowledge to be used for the improvement of policy and practice, the intervention demonstrated must be practicable in some real policy environment. The major question here is whether or not relevant institutions will be either willing or able to operate these programs. Interventions that are too ambitious may hamper both the willingness and ability of institutions to run and sustain them in the absence of sufficient new resources. Such initiatives may also involve lengthy and costly program development efforts. On the other hand, programs requiring only marginal changes in current services and interagency relations, while having the potential for quicker and less expensive implementation, may seriously limit the degree to which the demonstration will test innovative ideas.

In some sense, then, the design of intervention should be mindful of, though not wholly captive of, the policy and resource environment in which programs are envisioned to exist. In the absence of new legislation or resources, the demonstration should test whether and how the new intervention can be implemented within the current context. MDRC's JOBSTART demonstration, in addition to testing a model, will also generate observations on how the model interacts within the nation's primary job training system, the JTPA. The objective is to test programs that if effective can be replicated and to avoid designing a "hot house" program that could be operated only in an artificial world.

- Sites should be carefully selected so the intervention can be tested under realistic circumstances in a credible environment.

Demonstration findings will be of little value if based upon anomalous populations. At the same time, it may not be plausible in many cases to adhere to a strict doctrine of representativeness. Compromises will be necessary. But, the objective in structuring the demonstration is to assure that, in aggregate, the sample on which findings are based is sufficiently credible to allow for plausible application and inference beyond the demonstration sites.

- Technical and operational assistance must be provided for program development and to ensure the integrity of the model.

In order for the demonstration to produce meaningful results, the model must be given a fair test. Competent operators must be chosen and technical assistance made available to ensure the proper development and implementation of each local program. Additional care must be taken to preserve the integrity of the model. Local situations will differ and operators may need to make adaptations to meet their particular circumstances. Researchers must take great care to ensure that local adaptations do not significantly alter the basic model to be tested. Further, since various operators may have varying degrees of experience with model components, technical assistance must be delivered to ensure that operators have appropriate systems in place and that those systems are well oriented and well trained to the rigors of the model. Taking these precautions will help minimize the extent to which implementation flaws and peculiarities will confound test results.

- The demonstration design will require an active monitoring role by the researcher throughout the duration of the experiment in order to maintain the integrity of the evaluation.

As has been stressed in this presentation, the major consideration in launching a demonstration is to establish a rigorous evaluation process that will ensure that something is learned from the experiment. Rigorous evaluation methods require constant vigilance. In the context of MDRC's work/welfare demonstrations, MDRC maintained control over the entire research intake process determining who would be included in the experimental group, and who would be included in the control group. WIN and welfare offices would collect certain information from each candidate for the study and in phone conversations with MDRC would relate information gathered. MDRC staff, on the basis of this information, would determine whether the candidate was eligible to be included in the experiment (for example, people who were already employed or who had children under six years old were typically excluded) and, if so, checked whether the person was already represented in the sample. If the person was not already in the sample, MDRC staff, using a randomly-generated list of research codes, would assign the person to control or experimental status. But, a process that is initially random can be quickly corrupted if it is not regularly policed to ensure that persons already in the sample who reapplied for welfare did not crossover into another status.

Are New Entities Needed for Demonstration Research in Education?

The foregoing then are major considerations in MDRC's design and implementation of demonstrations. MDRC is probably not an appropriate judge of whether new research entities are needed to pursue these directions. But, it should be clear from the above that in conducting these efforts MDRC has played a multiplicity of important roles, some of which may lie outside the scope of conventional education evaluations. We have conducted exploratory research to define the issues; we have engaged in program design in attempts to develop potentially effective approaches; we have brokered program ideas to various communities, potential service providers and funders in efforts to package the demonstration; we have delivered technical assistance and operational expertise to operating units to assure their readiness to implement demonstration components; we have managed the demonstration and the research in order to assure the integrity of the model and of the random assignment process; we have collected and monitored the data and performed the analyses; we have produced reports with policy recommendations; and, we have mounted an aggressive dissemination program through presentations to national organizations and through government briefings at the federal, state and local levels. The one role MDRC has not played in demonstrations is that of program operator. Nevertheless, this is a much more expansive involvement than is normally envisioned in the conduct of educational evaluations. But, these roles are critical to the implementation of demonstration research and filling these roles may be the challenge facing educational research.

Application to Educational Research: Some Cautionary Notes

In the context of these deliberations, it is fair to ask whether a demonstration model, as we have presented it, is applicable in education. Our primary thesis has been that supporting good ideas with reliable evidence of effectiveness may be the recipe for educational improvement. So, the answer to the question of applicability rests on the feasibility of employing rigorous evaluation methods in the education context. Several considerations are important here.

As mentioned earlier, MDRC's research has been based mostly on second-chance programs. Contrasted to education, those programs have been embedded in comparatively simple program structures such as JTPA and the WIN program in the welfare area. These programs generally have had limited objectives, (e.g. employment and earnings) and involve participants for relatively short durations. Education, on the other hand, is an extraordinarily complex enterprise involving a variety of actors, in a complex treatment, with a variety of goals, over a longer period of participation than any other social service delivery mechanism in the nation. And, it is less clear in the education context whether the intervention programming typical of second-chance programs is the desired approach. Many educational researchers are arguing against add-on intervention approaches in favor of systemic reform. Educational reforms tend to be heavily process-oriented (as opposed to program-oriented) and consequently will likely touch every participant. Since a basic tenet of experimental research is the researcher's ability to withhold treatment from the control group, the potential contamination effects of these experimental process treatments from one class or school to another may pose difficulties for this type of design.

In addition, random assignment poses serious questions regarding the ethics of withholding services. In most of the second-chance programs evaluated by MDRC, this concern was mitigated by the fact that resources were usually not sufficient to accommodate all who are eligible. In this context, random assignment acted as sort of a lottery system which could be viewed as a fairer, unbiased method of determining the allocation of slots than procedures usually employed. It is not clear how this concern will manifest itself in the context of fully-funded, compulsory education.

An implication here is that a random assignment design may be applicable in only a limited set of educational research endeavors (e.g. for the evaluation of discrete programmatic strategies affecting only a portion of the population of interest). Even so, this should permit application of this methodology to many questions of interest to policymakers. In other contexts, other methodologies may prove useful. While there is evidence of consensus among researchers that random assignment is generally a superior approach for generating reliable impact findings, judgements can and should be made about the level of imprecision inherent in other methodologies (such as matched comparison groups and discontinuous time series) and the extent to which these levels of imprecision, if tolerated, will still advance the cause of knowledge about these programs.

Finally, I should point out that, while there are certain discrete outcomes of educational demonstrations that are amenable to short-term follow-up (e.g. program impacts on attendance, dropout and graduation rates), most of the major questions of interest - those focusing on the life consequences of particular program designs - will require extended longitudinal studies which may be expensive. Even the shorter-term measures may require longer follow-up than has been typical of second-chance programs. For instance, to determine the ultimate impacts of dropout prevention initiatives designed for middle grades (5-9), it will take at least four to eight years of follow-up. The necessary follow-up period will vary then upon the point at which the educational intervention is designed (e.g. elementary, junior or senior high).

Nevertheless, it is our view that demonstration research, properly applied and managed, can be a valuable tool for policy and program development in education. It allows for the formulation of policy and the implementation and design of programs on the basis of approaches proven effective as opposed to approaches merely deemed to be good ideas.

Priorities For Educational Research

You have asked us in these proceedings to comment on the directions educational research should take in the future. While we are not prepared to deliver such a broad assessment from our limited experience, I will share with you at least one area where I feel additional research in education is needed.

Across the nation, increasing disenchantment with the nation's welfare system has given impetus and increasing momentum to a movement across several states towards compulsory education for certain dependent categories of youth and adults (for the moment, only those on AFDC). The State of California, for instance, requires all welfare recipients with school-aged children who fail to pass a competency test and/or without a high school diploma or GED to enroll in remedial education. The State of Wisconsin is operating a Learnfare program for dependent youth. New Mexico has just enacted a similar statute. In the State of Missouri, two pilot Learnfare programs are operating. It is envisioned that the State of Minnesota will also enact legislation within the year and some 25 other states are beginning to investigate the Learnfare model.

If it continues, this movement may place a potentially heavy burden on the nation's adult education program. Yet, no national evaluation of the impact of adult education programs, particularly of the adult basic education, adult secondary education and the English-as-a-second-language programs, has ever been conducted. As such, policymakers contemplating compulsory programs have no guidance upon which to base their expectations for this population or for the adult education network's ability to serve them. The State of Calfornia, which currently houses 1/9th of the nation's welfare population, estimates that as many as 65 percent of participants in their welfare employment program (GAIN) may be in need of, and therefore required to enroll in these services. Moreover, welfare legislation currently pending in the House of Representatives would require states to provide education for all welfare recipients without a high school diploma or a GED.

These are all major policy decisions grounded in conventional wisdom concerning the importance of education to employability and self-sufficiency. Yet, there is no research that lends policy guidance to these directions. We neither know: how much education is enough; which types dependent individuals require; the characteristics of persons most and least likely to benefit from these programs; nor, how long and at what cost these services need to be provided. Our current research, evaluating the GAIN program, will yield some valuable first insights into some of these important issues.

The current movement towards compulsory education for certain dependent individuals, if sustained, may be potentially one of the more dramatic developments in the education arena in decades. Yet, its impetus stems from outside the education establishment, and it is not clear that educators are either prepared to deal with it or are aware of its coming. So, while I do not presume to be able to judge the adequacy of the federal government's effort in educational research, nor to present a schematic for the directions it should take in future, I do note at least this one area where additional research seems to be warranted.

I hope you will find our comments useful, and again, we are pleased for the opportunity to share these thoughts with you this morning.

Mr. Owens. Thank you, Dr. Hyman.

Dr. Richard Rowberg, and I understand that Dr. Rowberg is appearing with Dr. Michael Kaplan.

Richard Rowberg is the Chief of the Science Policy Research Division for the Congressional Research Service. Dr. Kaplan will serve as a resource to the subcommittee. He is Director of Basic Research for the U.S. Army Research Institute for the behavioral and social sciences. Dr. Kaplan speaks only for the institute and not for the Army as a whole.

Mr. Rowberg will begin by outlining some aspects of the military R&D structure, and Dr. Kaplan will assist later on in the discussion period.

Dr. Rowberg.

STATEMENT OF RICHARD ROWBERG, CHIEF, SCIENCE POLICY RESEARCH DIVISION, CONGRESSIONAL RESEARCH SERVICE; ACCOMPANIED BY MICHAEL KAPLAN, DIRECTOR, BASIS RESEARCH, U.S. ARMY INSTITUTE; AND MICHAEL DAVEY, ANALYST IN SCIENCE AND TECHNOLOGY, CONGRESSIONAL RESEARCH SERVICE

Mr. Rowberg. Thank you, Mr. Chairman. It's a pleasure to be here to testify before the subcommittee this morning. Also with me, I would like to introduce Michael Davey, an analyst in science and technology at the service, who is a coauthor of several of our reports on research and development, including those dealing with the Department of Defense.

I will describe this morning the Department of Defense's budget for research, development, testing, and evaluation.

The purpose of the DOD R&D program is to produce the science, technology, and engineering needed for the Department to provide for the Nation's military security. In the table which accompanies the written testimony, the DOD R&D budget obligations for fiscal year 1984 to the fiscal year 1989 requests are shown.

These obligations have grown from $26.7 billion in fiscal year 1984 to a request of $38.8 billion in fiscal year 1989, an average rate of increase of about 7.8 percent per year.

Because the entire DOD R&D budget contains activities which are distinct from most civilian Federal R&D budgets, however, it is useful to examine the components of the DOD budget. In the table, these components are presented.

First, there is research, which is primarily fundamental or basic science and engineering research, although it does include some applied science.

Second, exploratory development is concerned with practical applications of the knowledge gained from basic research.

Third, advanced development takes this process one step further to the construction of prototypes which can be used to demonstrate whether a particular application will work. DOD has chosen to place the Strategic Defense Initiative program within the advanced development component.

Finally, a component which we have labeled "other" but which DOD has a more definitive description, includes the engineering development of complete weapons systems which have not yet been approved for procurement and the research and development needed to develop and test these weapons systems once they have been approved for such procurement.

The first three of these R&D components—research, exploratory development, and advanced development—are usually called the technology base programs within DOD, including a portion but not all of the SDI Program. This group, particularly research and exploratory development, more closely approximates the kind of research and development undertaken by such Federal agencies as the National Science Foundation and the National Institutes of Health.

As seen in the table, the request in fiscal year 1989 for these categories, including just a portion of the Strategic Defense Initiative, totals about $5.7 billion and makes up about 14 percent of the total DOD R&D budget. The major portion of the total DOD budget for R&D falls within the so-called "other" component because the development, testing, and evaluation of the large-cost items such as new aircraft or missiles is carried out under this budget item.

In the defense area, basic research is the pursuit of knowledge about fundamental properties and behavior of physical objects and the physical and human systems that may have application for or are related to defense purposes. Not all defense basic research has defense applications, however, and some may have commercial application.

Of the approximately $900 million spent in this year on DOD basic research, about 50 percent is done at the Nation's universities, 30 percent in Government labs, and the rest in industry.

In addition to DOD, of course, the Federal Government funds other basic research and development programs. In fiscal year 1989 the Administration requested about $4.5 billion in nondefense basic research obligations and physical sciences and engineering, mostly at the National Science Foundation, the National Aeronautics and Space Administration, and the Department of Energy.

While the DOD R&D budget request is very large by most standards, the largest share of funds to the development of specific weapons systems chosen to augment the Nation's defense capability. The remaining funding is still large, however, although comparable to funding for science and engineering R&D in several other Federal agencies.

Thank you again for the opportunity to make this presentation, and we will be happy to answer any questions you may have on this testimony.

[The prepared statement of Dr. Richard E. Rowberg follows:]

Testimony of Dr. Richard E. Rowberg
Chief, Science Policy Research Division
Congressional Research Service
Before the Subcommittee on Select Education
House Committee on Education and Labor

April 21, 1988

The Research and Development Budget of the Department of Defense

My name is Richard Rowberg and I am Chief of the Science Policy Research Division of the Congressional Research Service. With me today is Michael Davey, Analyst in Science and Technology at CRS, who is the co-author of recent CRS reports on research and development and science in the Department of Defense, and is the author of a forth-coming report on the Department of Defense's technology base program. This testimony is based on these reports as well as a recent report of the Office of Technology Assessment, The Defense Technology Base: Introduction and Overview. Today I will describe the Department of Defense's budget for research, development, testing and evaluation (RDT&E). I will summarize the various components of the RDT&E budget, present trends in budget authority over the last five years, and discuss in more detail the basic research portion of the budget. The testimony will not discuss policy issues or comparisons to education R&D.

Structure of the DoD R&D Budget

The purpose of the DoD RDT&E program is to produce the science, technology and engineering needed for the Department to provide for the nation's military security. In table 1, DoD R&D budget obligations from FY84 to FY89 are shown. The table shows an increase in the total from $26.7 billion in FY84 to a request of $38.8 billion in FY89, an average rate of increase of 7.8 percent per year. The FY89 R&D total is about 12.8 percent of the total DoD obligations and about 62 percent of all Federal R&D obligations requested for FY89. Because the entire DoD R&D budget contains activities which are distinct from most civilian Federal R&D budgets, however, it is useful to examine the components of the DoD budget.

In table 1, the DoD budget is presented in four components: research, exploratory development, advanced development (including the Strategic Defense Initiative (SDI)), and a component we are calling "other". DoD divides this "other" category further into three more parts. Briefly, the definitions of the four components are as follows. (1) Research is primarily fundamental or basic science and engineering research although it includes some applied science. An example of this is in the field of advanced engineering materials, such as composites which are basically reinforced plastics. Basic research would be concerned with determining the basic properties of these materials such as their strength and heat resistance. (2) Exploratory development is concerned with practical applications of the knowledge gained from basic research. In our advanced materials example, such application could mean the development, construction and testing of parts that may be used on aircraft. (3) Advanced development takes this process one step further to the construction of prototypes which can be used to demonstrate whether a particular application will work. With advanced materials, for instance, either a new aircraft using the new parts could be built or the parts could be integrated with or tested on an existing aircraft. DoD has chosen to place the SDI program within advanced development. The purpose of SDI is to perform R&D leading to the development of technology and weapons which could be used for a ballistic missile defense system. (4) Finally, the "other" category includes the engineering development of complete weapons systems which have not yet been approved for procurement, and the R&D needed to develop and test those weapons systems that have been approved for procurement. A more detailed description of these components is contained in a recent CRS report for the Task Force on Science Policy of the House Committee on Science, Space and Technology. A copy of these definitions is attached to this testimony.

The first three R&D components -- research, exploratory development and advanced development -- are usually called the technology base programs within DoD. Because only about 10 to 15 percent of the SDI budget consists of technology base activities, DoD does not consider the SDI program to be part of its technology base program. The primary goal of these three components is to provide the scientific and engineering data and skills required to design and develop the weapons systems that may be needed for the Nation's defense. This group -- particularly research and exploratory development -- more closely approximates the kind of research and development undertaken by such Federal agencies as the National Science Foundation (NSF) and the National Institutes of Health (NIH). As seen in table 1, however, in FY89 these three components, including SDI, would make up only about 14 percent of the RDT&E budget. The major portion of the DoD R&D budget falls within the "other" category because the development, testing and evaluation of the large cost items, such as new aircraft and missiles, is carried out under this budget item. Summarizing table 1, we see that from FY84 to the FY89 request, research would increase from $842 million to $916 million, exploratory development from $2.2 billion to $2.4 billion, advanced development from $1.4 billion to $6.5 billion (including SDI which would grow from $49 million to $4.5 billion), and the "other" category from $22.3 billion to $29.1 billion.

Discussion

Since the objectives of the DoD research component (which is essentially basic research) are most similar to typical research programs, I will discuss this activity in greater detail. In the defense area, basic research is the pursuit of knowledge about fundamental properties and behavior of physical objects or systems that may have application for defense purposes. Not all defense basic research has defense applications, however, and some may have commercial applications. For example some of the basic properties discovered about advanced engineering materials may be applied to the construction of commercial buildings or civilian transportation equipment.

About 50 percent of defense basic research is done at the nation's universities. About 30 percent of DoD basic research is done at government laboratories -- mostly DoD labs, and about 20 percent is done in industry. The DoD University Research Initiative program is included within the basic research category.

In addition to the DoD, of course, the Federal government funds other basic research and development programs. In FY89, the administration requested about $4.5 billion for non-defense basic research obligations in physical sciences and engineering. Most is for the NSF, the National Aeronautics and Space Administration and the Department of Energy. In addition, requests of $3.9 billion were made for basic research in the life sciences in the NIH.

Conclusion

I have reviewed the DoD RDT&E budget including a discussion of the different components, funding trends and the FY89 request. While the DoD RDT&E budget request is very large by most standards, the largest share of the funds go to the development of specific weapons systems chosen to augment the nation's defense capability. The remaining funding is still large, however, although comparable to funding for science and engineering R&D in several other Federal agencies. Thank you for the opportunity to make this presentation and I will be happy to answer any questions you may have on this testimony.

Table 1. - DoD Research and Development Funding[1]

(billions of dollars)

Category	FY84	FY85	FY86	FY87	FY88	FY89[2]
Research	0.84	0.85	0.95	0.89	0.90	0.92
Exploratory Devel	2.22	2.27	2.28	2.34	2.39	2.36
Advanced Devel[3]	1.41	2.70	4.07	5.03	5.43	6.51
(SDI)	(0.05)	(1.39)	(2.66)	(3.26)	(3.53)	(4.52)
Other	22.27	25.28	26.20	27.82	29.17	29.09
Total	26.76	31.10	33.50	36.09	37.90	38.87

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[1] Data provided by the Office of Secretary of Defense

[2] Current administration request

[3] Includes funding for the Strategic Defense Initiative

1. CATEGORIES OF RDT&E

The second taxonomy for DOD RDT&E funding is based on functional categories. The DOD does not routinely employ the categories of "basic research", "applied research", and "development" in its budgeting and program management. Instead, it used a series of six RDT&E functional categories numbered 6.1 to 6.6. These are defined by DOD as follows:[1]

> *6.1 Research.* Includes scientific study and experimentation directed toward increasing knowledge and understanding in those fields of the physical, engineering, environmental, biological-medical, and behavioral-social sciences related to long-term national security needs. It provides fundamental knowledge for the solution of identified military problems. It also provides part of the base for subsequent exploratory and advanced developments in the defense-related technologies and of new or improved military functional capabilities in areas such as communications, detection, tracking, surveillance, propulsion, mobility, guidance and control, navigation, energy conversion, materials and structures, and personnel support.[2]
>
> *6.2 Exploratory Development.* Includes all effort directed toward the solution of specific military problems, short of major development projects. This type of effort may vary from fairly fundamental applied research to quite sophisticated breadboard hardware, study programming and planning effort. It would thus include studies, investigations and minor development effort. The dominant characteristic of this category of effort is that it be pointed toward specific military problem areas with a view toward developing and evaluating the feasibility and practicability of proposed solutions and determining their parameters. Program control of the Exploratory Development elements will normally be exercised by general level of effort.
>
> *6.3 Advanced Development.* Includes all projects which have moved into the development of hardware for experimental or operational test. It is characterized by line item projects, and program control is exercised on a project basis. A further descriptive characteristic lies in the design of such items being directed toward hardware for test or experimentation as opposed to items designed and engineered for eventual Service use.
>
> *6.4 Engineering Development.* Includes all those development programs being engineered for Service use but which have not yet been approved for procurement or operation. This area is characterized by major line item projects and program control by review of individual projects.
>
> *6.5 Management and Support.* Includes research and development effort directed toward support of installations or operations required for general research and development use. Included would be test ranges, military construction, maintenance support of laboratories, operations and maintenance of test aircraft and ships, and studies and analyses in support of the R&D program. Costs of laboratory personnel, either in-house or contract-operated, would be assigned to appropriate projects or as a line item in the Research, Exploratory Development, or Advanced Development Program areas, as appropriate. Military Construction costs directly related to a major development program will be included in the appropriate element.
>
> *6.6 Operational Systems Development.* Includes research and development effort directed toward development, engineering and test of systems, support programs, vehicles and weapons that have been approved for production and Service employment. 6.6 is not an official category as are 6.1–6.5, but is a term used for convenience in reference and discussion. Thus, no program element will exist numbered 6.6. . . . All items in this area are major line item projects which appear as RDT&E costs of weapons systems elements in other programs. Program control will thus be exercised by review of the individual research and development effort in each Weapon System Element.

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[1] DOD INST 7720.16 (OPNAV 3910.16), enclosure (3), p. 2-7, 2-8.

[2] Successful 6.1 projects often lead to 6.2 work to explore the uses of proven concepts in military applications. One frequently-cited example is the development of the laser, which received DOD support from the time of its invention and now has many proven civilian and military applications. The research of Nicholas Bloembergen, who shared the 1981 Nobel Prize in physics for research leading to the laser, was supported by the DOD Joint Services Electronics Program.

Note: Science Policy Study Background Report No. 8. Science Support by the Dept. of Defense. Report prepared by the Congressional Research Service. Library of Congress. For the Task Force on Science Policy. Committee on Science and Technology. U.S. House of Representatives. Dec. 1986. p. 66-69.

Mr. **Owens**. Thank you very much, Dr. Rowberg.

Perhaps Dr. Kaplan could elaborate a bit for us on the pattern of contracting for research, basic research, with universities.

One of the issues raised by Mr. Wallgren and others is the issue of the short-term nature of funding for research making it almost impossible to get the kind of staffing you need and conduct the kind of research which is viable.

Or perhaps you can tell us a little bit more about what the pattern of letting contracts is with your operation.

Mr. **Kaplan**. Yes, Mr. Chairman.

Mr. **Owens**. Pull the microphone closer to you, please.

Mr. **Kaplan**. First of all, the U.S. Army Research Institute for the Behavioral and Social Sciences deals with topics and problems which are quite different from most of those which Mr. Rowberg has been discussing. Rather than weapons systems and so forth, our concern is with people.

The institute that I represent is structured in terms of three laboratories dealing with systems or new systems coming into being; a group on manpower and personnel which is covering everything from selection and classification to issues of Army families and the way they are affecting the men and women who are soldiers in the Army; and finally, to a laboratory which is called the training research laboratory, whose problems in many ways are very, very similar to the problems that all of you are dealing with.

Most of these groups within our institute are devoting themselves to applied research, trying to solve rather specific problems ultimately. On the other hand, we have a unit within my institute which is known as the office of basic research, which is the unit I represent, which is looking at much more fundamental issues relating to all of these problems.

Our institute is unique, I think, in the sense that the basic research programs, the exploratory development programs, the advanced development programs, and finally engineering development, the kinds of activities to which Mr. Rowberg alluded generally, all of these kinds of activities are represented within our institute with respect only to these people-related problems.

My office at the present time is dealing with some 60 research contracts, of which 80 percent have come to us from universities. We are approached by university scientists and others in very much the same way that the National Institutes of Health and the National Science Foundation are approached, and we review these proposals that we receive in an appropriate way for merit and for ultimate relationship to the applied programs that my institute has to deal with.

Once basic research is conducted by our university scientists and so forth, these men and women are free to publish in the open literature, and indeed their results are available to all of you and to the community at large. But because within the institute we do have this mechanism, this representation of the other three types of activity, we are able to do things that we call transition from basic research to exploratory development and ultimately from there to the more advanced approaches and finally to engineering or program development where activities lead to the field.

One example in the area of training that might be of interest to all of you——

Mr. **Owens**. Would you pull the mike just a little closer?

Mr. **Kaplan**. Yes. I'm sorry.

One example in the area of training which I think might be of interest to many of my colleagues here is in fundamental research on learning strategies. A simple example of one of these would be the notion of using mnemonics, for example, to help memory. But there are many more, and many of our university people are looking at issues that relate to training in a much more fundamental way.

In any case, some work, some of it conducted by one of the professors at the City University of New York, another professor at Texas Christian University, and so on, some of this work, has found its way to the exploratory development program, one of our units within the institute, a unit that deals with technologies for skill acquisition and retention. And it has contributed in a significant way to a more applied or exploratory program called the job skills educational program, whose concern is with the issue of teaching men and women in the forces the fundamental skills that they would need as a precursor to going on to performing many Army jobs.

This work is now in a kind of a demonstration status at a number of units of the Army throughout the country, and in fact some of this work has been adopted by General Motors and some institutions within the State of North Carolina.

It's a nice little example, quickly cited, of this notion of transitioning from some efforts in fundamental research to ultimate application. I think it's also a nice example of the fact that some of the research which starts under the auspices of my little office within the institute not only has a bearing on the problems of the Army and the young men and women who are making their way through the Army but it also has a bearing on what we might roughly call the civilian community. As you see, this is an example that I have given you which shows, if you will, how work which started with us found its way to the country at large, if one might say so.

So, I think it is fair to say that a goodly amount of the research which we start in a very fundamental way also has implications not only for the military but let me say again of all of us, for the country at large.

Let me just stop there. I think that may have perhaps answered your initial question.

Mr. **Owens**. Well, you fund research which goes all the way from literacy to the high cognitive development type of research and the people who do the research are free to publish. And do they publish widely?

Mr. **Kaplan**. Oh, they do indeed. And indeed we are very proud, sir, of their record of publication and their recognition. One of our scientists—perhaps I might name him—is Prof. George Miller at Princeton, who at the moment has a very exciting program going on in the field of language acquisition, and there is a variety of reasons for encouraging this research. But for example, Professor Miller is a member of the National Academy of Sciences, and so, if

I may say so, we feel quite pleased and privileged that such a distinguished scientist is in a sense collaborating with us to look at some very, very fundamental issues.

We recently had him with us in process review of the basic research contracts, and he and I had a little discussion about how the fundamental work that he was doing on the acquisition of language in young people might also have a very strong bearing on the teaching of foreign languages to young people. When one considers the world we live in, if I may interject that thought, the need to begin to communicate with other people I think is very strong. And so Miller's work, I think, is going to have long-term implications for that.

Mr. **Owens**. My first question, I still don't—I would like you to clarify. Could you give us some examples of the length of funding you have provided for certain researchers?

Mr. **Kaplan**. Yes.

Mr. **Owens**. Have you funded projects to cover 5- or 10-year periods?

Mr. **Kaplan**. No, sir.

Mr. **Owens**. What is the average length?

Mr. **Kaplan**. Typically, most of the projects, I would say, within the last few years have tended to be for the most part 3-year projects. You have fundamental pieces of work. In some cases they are 1-year projects to get at a particular point. We have one or two which will be finishing up soon that are 5-year projects.

Mr. **Owens**. This is in the basic research area.

Mr. **Kaplan**. Yes, sir.

Mr. **Owens**. Now, the projects that are funded in the applied section of your institute, are they also funded, do you also contract to universities and outside groups, or do you do most of that inhouse?

Mr. **Kaplan**. That is variable from year to year. It is the case now that within our institute a great deal of the applied research is contract research because we don't have sufficient personnel to conduct a lot of these programs inhouse.

But an amount, from 30 to 40 percent of research, applied research is conducted within.

Mr. **Owens**. Does it follow the same pattern in terms of the length of time, both contracted and not, or do you have longer periods?

Mr. **Kaplan**. It varies by virtue of the nature of the problem. For example, there has been continuing within the institute or under the auspices of the institute for some years some very long-term research relating to the prediction of performance of young men and women who are soldiers in the military and how when they predict their performance in terms of something known as the Armed Services vocational battery and indeed other aptitude tests, there are other issues relating to the performance of soldiers which are being investigated as well in terms of more applied research, trying out various predictive procedures.

But some of those projects may last a year, depending on what the senior military leadership would like our institute to take or it may go on for many, many years, depending on the nature of the problem and how it is proceeding. But the length of time varies.

Mr. **Owens**. Have you ever had any funding for 10 years?

Mr. **Kaplan**. Pardon?

Mr. **Owens**. Ten-year contracting?

Mr. **Kaplan**. I am going to say that I don't think so, but I really can't answer that with absolute certainty.

Mr. **Owens**. Mr. Wallgren, what is the longest contract you have been able to get from a Government source? You get your funding from a number of sources, and one of the problems is this funding over a period of time. What is the length of time for Government-funded contracts?

Mr. **Wallgren**. The normal length of time for a specific contract is 1 year. However, they are renewable up to as long as 5 years. That would have been project like project development for continuity and our evaluation.

Mr. **Owens**. Now, are you familiar with the labs and the centers in the area of information dissemination units in the federally funded setup?

Mr. **Wallgren**. Somewhat.

Mr. **Owens**. Could you comment on the capacity of this apparatus in terms of some of the kinds of things that you felt had to be done as research proceeded? Do you think it's suitable for the kind of process that you outlined?

Mr. **Wallgren**. My sense, Mr. Chairman, is that labs and centers find themselves at a disadvantage compared to an organization like High/Scope. I would say the disadvantage comes from basically two elements. One, they are bound geographically to serve a clientele and, therefore, they are responsive to that geographic area in which those needs are. I think you will find there are projects like that.

I think the second thing is that they don't have the flexibility to get the funding, achieve the funding from external sources if the Government agency—NIH, for example—is not particularly interested in funding that particular piece of research. That is my impression.

Mr. **Owens**. Dr. Hyman, what about the stability of your operation, are you in a position to do long-term research?

Mr. **Hyman**. Well, I think the answer to that question hinges back on your original one.

Mr. **Owens**. Can you pull the mike closer?

Mr. **Hyman**. I think the answer to that question harkens back to your original one as to whether or not there are sources for long-term funding. MDRC has been very successful over time at weaning itself from federally funded research. While we are currently working with ABT Associates and with JTPA evaluations, as you know, which are federally funded——

Mr. **Owens**. Can you pull the mike a little closer still?

Mr. **Hyman**. While we are currently working on the JTPA evaluation, which has been federally funded, most of our projects of late have been projects that MDRC has brokered itself both in terms of putting the demonstrations together as well as connecting funding from various sources with that.

Mr. **Owens**. So, most of your funding is not Government funding at this point?

Mr. **Hyman**. Not at this point. I think—and these numbers are not going to be exact—I think our funding from the Federal source is somewhere around 25 percent or less at this point. That's 25 percent or less at this point. But I will provide you with some exact numbers.

Mr. **Owens**. You said 25 percent or less?

Mr. **Hyman**. I will provide you some exact numbers.

In fiscal year 1987, MDRC was receiving 24% of its funds from Federal sources.

Mr. **Owens**. You made some very strong recommendations or observations, I might say, about the thrust of welfare reform legislation and the emphasis being placed on educating adults.

Mr. **Hyman**. Yes.

Mr. **Owens**. And you see no resources being made available or no institutions out there. Could you comment on that? Were you contracted or involved in any way in researching any aspects of the welfare reform legislation?

Mr. **Hyman**. Yes; let me say something about that.

Mr. **Owens**. I mention this because I think in the context of welfare reform legislation and the concern about parents on welfare, there is a possibility of merging these two concerns with the concern about greater education of parents of children, disadvantaged children.

In my district, for example, 30 to 40 percent of the families on welfare, we also have a tremendous problem with respect to education, and if we are really serious about trying to develop some new approaches to the involvement of families and the involvement of parents and educating parents or involving parents in the educational process of young children, then it seems to me that here is an opportunity to merge two Federal concerns.

For that reason I think the educational research community should be looking very closely at what is happening with respect to the education of welfare mothers or welfare fathers and the proposals that are being made in that area.

So, that is the background for my question.

You may proceed.

Mr. **Hyman**. Indeed. Well, I think our observations are, from doing a lot of work with welfare populations in the United States and offering programs to them, our research basically shows at this point that the programs we have evaluated in general have modest positive impacts on employment and earnings.

One of the major unanswered questions that we have been trying to think about is whether or not programs that do more intensive kinds of things like education and training would cause those impacts to increase; that is to say, participants on average, would they have better employment opportunities and higher earnings if they were provided services through these welfare programs that were somewhat more intensive than the kinds of services currently provided? I can describe those, but I don't want to take up too much of your time with that portion of my response.

The movement that I think we see occurring right now is in several places. Here in the House of Representatives, pending in Ways and Means, is H.R. 1720 that would require States to provide education for dependent adults lacking a high school diploma.

Now, that legislation does not require those persons to participate in programs provided by the State, but it's conceivable that regulations promulgated for that bill might do that.

Outside of that, California has a new welfare/employment program called GAIN that is now operational. It requires eligible adults—this is the WIN eligible population, AFDC women with children of school age to participate in some work-related program. One of the first activities that occurs is a test. If the welfare mother scores less than 215 on that test, or fails to have a diploma or a GED, she is required to take advantage of education, required to do so.

Now, that is a major policy direction based, I think, on conventional wisdom about the value added by education through employment and earnings. But there isn't any study ever conducted that really tries to determine what the impact of education is on adults, particularly on this population.

So, policymakers trying to look at this direction, in my judgment, have no guidance as to what their expectations from this population ought to be, what subgroups of this population might best benefit from this kind of service, is there a level of education and functioning that is too low to require someone to go to these programs? What do you do with someone who is illiterate and learning-disabled who might be also a welfare recipient? And how do you handle that person's requirement to take education? What do you do with them if they don't achieve, what's their status in the program?

In Wisconsin you've got a Learnfare Program that is operating that goes beyond California's GAIN and requires not only that the head of the caseload take education but that dependent children in that caseload take education. You've got two pilot programs in Missouri, one is voluntary, one is mandatory. The State of New Mexico 2 weeks passed legislation for Learnfare. Minnesota may very well do so within the next few months. There has been lots of discussion there. And there may be as many as 25 other States looking in the direction of compelling certain dependent adults to attend education.

It's my sense, from talking to education colleagues, that the educational establishment may not be aware of this issue. California, as I say in the testimony, initially estimated that 15 percent of those required to avail themselves of this program may need education. They have revised that estimate up to as high as 65 percent. That is a major, major potential additional demand for adult education services.

Our current involvement with this issue extends only as far as our current contract to evaluate California's GAIN program. We will be generating some observations from that program that may touch on some of these questions. But we, frankly, are trying to at this point refine our agenda in that question area about this adult education question and probably we will need to broker additional resources to get deeper investigations into that.

Mr. Owens. In other words, through Federal and State Government policies, we are pushing welfare recipients into a situation where they will be out there forced to look for education or somebody has to provide education for them, which means that the educational community will be confronted with a major challenge in terms of providing education for these adults.

It is also a major opportunity for school systems and people who are concerned about the education of the mothers of young children and the establishment of some kind of partnership with the parents in that educational process. It's an opportunity, it seems to me, that we should be aware of.

Before I leave the question of the education of adults, I wanted to ask you to what extent are you aware of the research being done by the Army, for example, or to what extent are their products available to you, their publications? Is there any interaction between an entity like yours which is focusing primarily on adult education and manpower training, which is very close to what the Army is concerned with? Any close cross-coordination that is taking place now?

Mr. **Hyman**. Not to my knowledge, Mr. Chairman.

Mr. **Kaplan**. Mr. Chairman.

Mr. **Owens**. Yes, Dr. Kaplan?

Mr. **Kaplan**. May I comment on that?

Mr. **Owens**. Could you move the mike closer, please?

Mr. **Kaplan**. I thought I might mention that reports from the Army Research Institute which are unclassified——

Mr. **Owens**. They are unclassified and available?

Mr. **Kaplan**. Those which are unclassified, and certainly in these areas they are.

Mr. **Owens**. Do you disseminate or require that they be disseminated in any special way by the people who are contracting with your unit?

Mr. **Kaplan**. The institute has a distribution list. However—and I don't know that it is quite that wide—it's possible that copies of some of these things, for example, would go to the office of education. I'm not sure.

But the point I wanted to make, sir, is that when our technical reports are published inhouse as they are, notification also goes to the American Psychological Association, and there is a listing in psychological abstracts. Similarly, these things are reported in the defense technical information agency.

So there are many ways, at least two that I can think of, in which this kind of information is made available. Anybody searching the various databases of current literature would find reference to the work that our people are doing. It may not have been generally known, but this is indeed the case.

Mr. **Owens**. On the question of duration of funding, I have just one last question, a comment and a question.

Mr. Wallgren, not far from here is a place called Newport News, Virginia, and there is a shipbuilding company there that is unique. There is nothing else like it anywhere else in the world because they build nuclear aircraft carriers. Nuclear aircraft carriers are so big and so complicated that until all of this is a private enterprise, then I suppose other private enterprises could compete with them.

The tooling up process, the capitalization process is such that only Newport News shipyards have developed this expertise and have a big enough drydock and is a sole source. We cannot buy aircraft carriers or have aircraft carriers built anywhere else except there. They also build submarines and a few other specialized items.

So, we have a situation where there is this one entity which the Government always contracts with. We contract with them for several years ahead of time in many cases because that's necessary to make sure you stay abreast in terms of weapons construction.

It seems to me that it is possible to reach this point when you have an institution like yours, which has demonstrated its ability, demonstrated its uniqueness, I think, in this area, and it would be possible to make a case for some kind of special designation of funding, Government funding, for the kind of research that you do on a long-term basis.

My question is, Am I correct that you are almost unique in the kind of longitudinal studies you do on the area that you focus on, that there are no other organizations that are quite in the same category?

Mr. **Wallgren**. Mr. Chairman, you are correct.

I would like to make some comments about your statement, though. I have read about the price of the toilet seats in those nuclear aircraft carriers as criticized by Congress.

My feeling about organizations like Newport News, that kind of operation, is not what we need in educational research. I think there are disadvantages if we——

Mr. **Owens**. I assure you my comparison is quite limited. We are not talking any thing like those megabucks and we don't have to take on the excesses.

Mr. **Wallgren**. Right. Correct.

Mr. **Owens**. Just the stability in funding and recognition of the unique capacity.

Mr. **Wallgren**. I think the problem is, in my perspective, of identifying specific institutional systems that are going to solve this problem of educational research.

For example, you asked me earlier about the labs and centers. High/Scope considered the RFP that was released a couple of years ago when they were talking about adding new labs in centers, and our board of directors and the people at the foundation decided not to go that particular route because it would have destroyed the mission of High/Scope in the particular work that we were in, not that the labs' and centers' posture is wrong and that it's negative. We think we should have them.

But the Government should not limit itself by identifying a particular source that is going to be the element that is going to provide us with all the answers in educational research. We need a flexible system, one that the Government can allow people to do the kind of research and achieve the kind of missions that we think ought to be done.

Mr. **Owens**. Thank you very much, Mr. Wallgren.

We have a vote on now. I will have to recess for about 10 minutes. However, I would like for you to stay in place and just make one last response when I return as what would you recommend in terms of bringing together, of taking steps to bring together the vast array of research that is being done in the various Government sectors along with the private sector on education.

We have had one dramatic example, I think, of tremendous amounts of money being spent by the Army on research which is applicable in the civilian arena, and I very much doubt whether much of that is being even read or picked up in the civilian arena. I very much doubt if we have made an effort as the taxpayers who finance the research, if we have made an effort to make certain that it's disseminated to the larger community. Just that response I would like to get from you when we return.

Thank you very much for waiting.

[Recess.]

Mr. **Owens**. The subcommittee will come to order.

Gentlemen, you are not mandated to make that last comment in response to my question. But if you would care to, we would appreciate it.

Mr. Wallgren. Mr. Wallgren, my last question, I asked all of you to make a comment on the problem of how do we best structure research and development for education. We have a scandal in terms of the paucity of resources allocated.

We are going to fight to get more adequate resources for research and development in education. But part of the problem in the fight is that there are people who question the structure and question whether we have the kind of credibility and stability that is necessary to really carry out the mission that we say we want to conduct.

So, the question of structuring is a primary concern of this hearing. One possibility that has been proposed was proposed in an editorial by the New York Times which said for educational research and development we should seek to create a quango or a combination or a quasi-public organization which combines the Federal and the private profitmaking sector and the private nonprofit sector, all under one overall guiding umbrella organization to conduct research and development and the application of research, et cetera.

Mr. Hyman, your organization was suggested as a model by a few people. Other people have said that it's such a problem we need to establish a commission and ask for the National Academy of Sciences to conduct a study. And maybe we will do all that, but while we have you here, if you have any comments to make about how we can restructure the effort that we have or structure a totally new effort. We have education labs and centers, individual researchers and a number of other things going already. But either a new structure or restructuring is one of our concerns.

If you have a comment, we would appreciate it as your final comment.

Mr. **Wallgren**. Mr. Chairman, I do have a comment.

I think my strong feeling is that the solution is not to focus in and find the solution with one or two different kinds of organizations. I think the Government's posture needs to be one of opening it up and allowing institutions to participate in the process.

Mr. Hyman's comment earlier about 20 percent of federally funded programs at his institutions generated a thought in my mind. In 1972, when I joined High/Scope, we were operating on about 85 percent of federally funded programs. Today we are down to 8 percent. That says something about the Federal availability of research dollars, I think. I think institutions like High/Scope could take advantage of Federal dollars in promoting and completing its mission, but by establishing an institution or an institute or an organization or one quango that is going to solve the problem of educational research, I don't think that will happen.

I just think the availability of resources to people who have the vision, people who can tackle the mission and solve these problems, those resources need to be available. And to restrict them in any sort of way by establishing one mechanisms or labs and centers, as if they are going to be the solution to this problem, sir, I don't think is the way to go.

Mr. **Owens**. Thank you.

Dr. Hyman?

Mr. **Hyman**. Mr. Chairman, I am not sure I can add anything to Mr. Wallgren's point except to say that I do think that allowing a diversity of approaches and research techniques to be brought to bear on pressing issues might be a way of making sure that there is a fertile atmosphere for productive research in this area.

What we have done in this testimony is to suggest that at least one particular direction for research, we think, would offer some promise of generating some usable knowledge. We have focused mostly on the roles that we have played at MDRC in conducting that type of research, and I would submit that it may be that an important thing to focus on is who and how those roles might be played in the conduct of certain educational research.

So, I have no real suggestions about structure. It's sort of I would refer you back to the testimony, and I would suggest that we think those roles have been very crucial to making sure that we were able to learn something from the research in which we engaged, and that might be the thing to focus on, in part.

Mr. **Owens**. Dr. Kaplan.

Mr. **Kaplan**. I don't think it's appropriate for me in my position to comment on how all these things should be structured.

But on the other hand, I would like to add to one comment I made earlier, which is that for our part, certainly my office and my institute, some considerable efforts of various types have been made to acquaint the public at large and relevant people with some of the work that's going on.

For example, some years ago the director of our training lab was engaged in a demonstration project.

Mr. **Owens**. Can you pull the mike a little closer or use the other mike? Your mike seems to be rather weak.

Mr. **Kaplan**. Can you hear me now?

Mr. **Owens**. Yes.

Mr. **Kaplan**. Is that a little bit better?

Some years ago the director of our training laboratory and some of his people had some demonstration projects presented up here on Capitol Hill, showing some of the research work that we were engaged in. Earlier, a basic skills educational program which we had developed was adopted by Motorola.

I would add that in relation to my own office and the various researchers who deal with us from the university community, that there is a very, very extensive interchange. Indeed, we are involved, I suppose, with most everybody, at least at the research level.

In addition to that, I would also point out that we have attempted to, in inviting people, for example, from the educational community, shall I say, the governmental educational community, to participate in some of our in-process reviews of contract research so they could join with us in interviewing and discussing with some of the researchers the work that is going on.

I guess the total point that I want to make is that we certainly within this little institute of mine and this little office of mine, we are certainly open in every conceivable way to exchange and interchange and not only that we welcome it but we feel that it is important for us to know about the problems of the educational community at large to help us perhaps make some judgments about the worthiness of research proposals that come to us.

Finally, sir, I know that many statements have been made here this morning about the large amounts of money that seem to go into R&D within the Department of Defense and the Army. Some of us never quite see these large amounts. My own little office has something like a $3 million budget, and it's about to go into a third year of no new starts. So, I guess the budgetary problem is somewhat more complex than we often seem to view it. Many critical issues facing what we might call people research are not as well funded even within the Department of Defense as we might wish.

We thank you very much.

Mr. **Owens**. Thank you. I think that is an important statement. People issues are not funded. People issues usually relate to education.

Yes, Dr. Rowberg?

Mr. **Rowberg**. Well, I would like to have two closing comments, not about structure because I am not qualified to speak about that, but I would like to emphasize points that have been made and that we have discovered in our research on various issues.

First, stability of funding is quite important. In a study that the Office of Technology Assessment recently released that Mr. Davey was closely involved with, stability is a question there too and a concern. It's a question and concern with a great deal of research, whether it's science education and so forth.

Second, information transfer and information dissemination is also a concern, whether it is passage of information about education or passage about new discoveries in superconductivity. It is a critical issue in the Nation and throughout the world.

Mr. **Owens**. Thank you very much.

I want to thank all the panelists, and we might want to submit some additional written questions to you and ask for your response, and we might want to consult with you in the near future as we seek to carry out this process.

Thank you all very much.

Our second panel will consist of: Mr. Chris Cross, the president of the University Research Corp., chairman of the laboratory review panel of OERI; Dr. John E. Hopkins, the executive director of Research for Better Schools; Dr. Susan Fuhrman, director of the Center on State and Local Policy; Dr. Gordon Ambach, the executive director of the Council of Chief State School Officers; Dr. Nancy Cole, the president of American Educational Research Association; and Ms. Judi Conrad, assistant director, ERIC Clearinghouse on Handicapped and Gifted Children, and the chairman of the Council of ERIC Directors.

Again, I would like to remind the panelists that I have reviewed your testimony and been very much impressed with the great deal of thought, the thoroughness and intensity reflected in your testimony. I do appreciate the energy that you have invested in this effort.

Your prepared statement will be inserted immediately following your oral presentation. We would like for you to highlight your testimony, and there will be a bell at seven minutes, but please feel free to continue, hopefully not more than 10 minutes, in your testimony.

We will begin with Mr. Cross.

STATEMENT OF CHRIS CROSS, PRESIDENT OF THE UNIVERSITY RESEARCH CORP., AND CHAIRMAN OF THE LABORATORY REVIEW PANEL, OERI

Mr. Cross. Thank you, Mr. Chairman. It is a pleasure to be here this morning representing the laboratory review panel of the Office of Education Research Improvement.

The laboratory review panel was appointed in June of last year by Assistant Secretary Finn to assist the department in conducting a review of the regional education laboratories and to assist the assistant secretary on policy regarding the labs, with specific emphasis on the 1990 reprocurement. In addition to myself, the panel included five other individuals, whose names are cited in the written statement.

The panel's primary objectives during 1987 were to assist OERI in evaluating the site reviews of the regional labs, to advise OERI on improvements in that process, and to offer to the assistant secretary an overall perspective on the review process.

We also reviewed the accomplishment of the labs in the first two years of their operation and their plans for years three through five.

The report which we submitted to the assistant secretary and which I understand was made part of his submission to the subcommittee yesterday was divided into three parts. The first consisted of observations of the review process; second, observations on the 3- to 5-year plans submitted by the labs; and third, recommendations regarding the future of the programs. Observations about the review process are mentioned in my written statement. I will not go into those orally.

With respect to the observations about the 3- to 5-year plans, the laboratory review panel had eleven major recommendations and observations.

First, we felt that the 3- to 5-year plans left us with questions about the overall clarity and vision of the labs' mission. We felt it was almost impossible to get one picture of what the labs are doing, and we found the plans too verbose and too obscure, prompted at least, in part, by Federal requirements regarding what they had to cover. We were also concerned that the individual labs did not seem to have a strategy as to when to offer, refuse, or stop service to constituents.

Second, we felt that the way the labs set priorities were not clear. The needs assessment data which the labs collect could potentially support many different strategies. The labs were not clear in their statements in setting forth the reasons underlying the actual choices that were made. For example, in the case of one lab, it noted that the region it was serving was undergoing severe economic problems, and yet proposed no specific programs to deal with that problem.

Third, the panel felt that the indirect service strategy known as with-and-through needs further examination. This strategy appears to confound the issue of how one measures the impact of the labs, especially in the area of school improvement. This also subjects the labs to influences beyond their control, such as the case in California where the Governor cancelled major technical assistance centers which were the fundamental building block in the strategy of the lab in that region.

Fourth, the lab review panel was concerned with how the labs deal with the question of whether they are proactive or reactive in their regions.

Fifth, we questioned to what degree should the regional labs have some national identity for a specific area. Is it desirable, is it realistic, or is it even achievable?

We also were concerned about the lack of collaboration between the labs and the other Education-funded resources, and we have a table which I have included in my testimony today which cites those, and I would draw yours and the members of the subcommittee's attention to that because I think there is a significant issue there around the proliferation of mechanisms which the Federal Government funds which reaches out to school districts. I would not want to be in the position of being in a school district looking up at these 12 to 15 different entities that are supposed to be providing services and trying to understand how they coordinated, collaborated, or even related to one another.

Sixth, the laboratory review panel was concerned about the collaboration among labs. One of the tasks of each of their contracts calls for this, and yet there appear to be few incentives for that to occur.

Seventh, we saw very little evidence of services being provided to nonpublic schools and saw little evidence of participation of nonpublic school representatives in the policy councils of the labs.

Eighth, we were concerned that there seemed to be overregulation of the labs. The degree of overreporting to OERI seems excessive. And frankly, we felt that the current procurement mechanism, and indeed none of the procurement mechanisms that we could identify, seemed to be appropriate instruments to deal with the support of the labs.

Ninth, we were also concerned about the relationship between OERI and non-OERI-funded activities which occur in the labs. We note that several of the labs have become quite entrepreneurial in terms of their activities, while others, to use the phrase, have stuck to their knitting. This creates some inequities, and it also raises a question of whether OERI is unwittingly underwriting unfair competition by labs in non-OERI-funded activities.

Tenth, we thought there was a great deal of difference in the organizational maturity of the labs, and we felt that the department was not addressing that issue. Particularly, the newer labs have a cash flow problem that has been exacerbated by the way the department has handled that. And we also felt that the lack of fees to the laboratories is an issue which needs to be addressed.

There are in fact unallowable costs which the labs cannot recover, including floating a loan to wait until the next Federal check arrives, and those are not costs which they have any way to handle under current funding arrangements. That is an issue that needs to be addressed.

Finally, the last recommendation dealt with some specific issues regarding three of the newer labs, and I will not elaborate on those here.

In the last section of the report we raise recommendations regarding the future of the program. We said first that the department needs to find a way to make the programmatic realities of the labs more compatible with contractual requirements.

Next, that the department needs to strengthen the Contracts Office so that the long procedural delays that the labs face will be eliminated.

We felt that there needed to be more examination to the problems of financing, especially cash flow and fees.

We believe that the entrepreneurial nature of the labs must be examined; that the paperwork generated by the labs and by the Department must be made more succinct and clear in terms of purpose and need; that the implications of the with-and-through; the indirect service strategy must be examined; the assumptions about the needs assessment process need to be reexamined; that OERI must do more to provide collaboration among the labs and with other Education Department-funded resources; and finally, that OERI should conduct further examination of the lab programs at the level of the field recipient.

As I mentioned, the full report of the lab review panel is included in the Assistant Secretary's statement of yesterday. I would be happy to answer questions at the appropriate time.

[The prepared statement of Christopher T. Cross follows:]

Statement of Christopher T. Cross
President, University Research Corporation, and
Chairman, Laboratory Review Panel

Office of Educational Research and Improvement
U.S. Department of Education

Thursday, April 21, 1988
before the Select Education Subcommittee
Committee on Education and Labor
U.S. House of Representatives

Mr. Chairman, Members of the Subcommittee. It is a pleasure to be here this morning on behalf of the Laboratory Review Panel of the Office of Educational Research and Improvement of the U.S. Department of Education.

The Laboratory Review Panel was appointed in June 1987 by Assistant Secretary Finn to assist the Department in conducting a review of the Regional Education Laboratories, and to advise the Assistant Secretary on policy regarding the labs, with specific emphasis on the 1990 reprocurement. In addition to myself, the members of the panel include Ernie House, a professor at the University of Colorado; Joy Frechtling, an administrator of the Montgomery County Schools; Alex Law, an official of the California Department of Education; Garry McDaniels, an educational software developer; and Carl Sewell, an educational consultant.

The panel's primary objectives during 1987 were to assist OERI in evaluating the site reviews of the Regional Labs, to advise OERI on improvements in that process, and to offer to the Assistant Secretary an overall perspective of the review process. We also reviewed the accomplishments of the labs in the first two years of their operation, and plans for years three through five. As a part of that process, most of the panel members also accompanied a team on its visit to one of the regional labs last summer. We also reviewed the original proposals of the labs, their self-evaluation reports, their three-to-five-year plans, and the comments of the OERI Institutional Monitors.

Following the site visits, LRP convened in late August to meet with the Chair of each of the site visit teams to review their findings. We discussed our general concerns such as the impact of the labs in assisting practitioners and the Department's sensitivity to the unique needs of the individual labs. We also met with each of the institutional monitors for OERI. In early September, each panel member reviewed his/her notes and reports of the site visit teams in preparation for a two-day meeting in late September. During that meeting, each lab director was asked to share his/her concerns and comments, and we questioned them about the panel's areas of concern and issues that had arisen through the review process. We began the drafting of our report to the Assistant Secretary. The report was submitted in late October, and copies of it have been made available to the Members of the Subcommittee.

The report is divided into three parts.

I. Observations on the review process.

II. Observations on the 3-5 year plans submitted by the labs.

III. Recommendations regarding the future of the program.

OBSERVATIONS ABOUT THE REVIEW PROCESS

First, let me make it clear that the LRP did not examine the impact or the programs of the individual labs. Rather, we examined the review process itself and drew from our studies global, overarching questions. The individual site review teams concentrated on issues of specific lab programs. Also, OERI is planning some further work which will trace the effectiveness of specific lab programs.

Secondly, the LRP found the review process itself to be exceptionally well organized and implemented. We did, however, make several recommendations for future reviews: giving reviewers exemplars of good lab practices, having each team visit more than one lab, and spending more time examining the quality and impact of lab products. We felt that site review team members should be paid an honoraria, and that OERI needs to assign more staff to work with the labs. We also felt that in any future site review, it is critical that the review teams spend a considerable time in the field talking with recipients and potential recipients about the services of the lab in that region.

OBSERVATIONS ABOUT THE 3-5 YEAR PLANS

The bulk of the report of the LRP is devoted to our observations about the 3-5 year plans submitted by the labs. Our comments are also informed by our own site visits, our meetings with the site team leaders, the lab directors, and the OERI staff responsible for the lab programs.

The panel had 11 major recommendations and observations.

1. For the most part, the 3-5 year plans leave questions about the overall clarity and vision of the labs' mission. We felt

that it was almost impossible to get one picture of what labs are doing. We found the plans too verbose (prompted at least in part by Federal requirements), and far too obscure. We felt that this very vagueness was contributing to the difficulty in setting expectations for lab performance, and then in the ability to measure that performance. We were also concerned that the individual labs do not seem to have a strategy as to when to offer, refuse, or stop services to constituents. We were uncertain as to the role of the labs in the school improvement process.

2. We felt that the ways in which labs set priorities are not clear. The needs assessment data which the labs collect could potentially support many different strategies, and take many more resources than any lab has available. We felt that the labs were not clear in setting forth the reasons underlying the actual choices that were made. For example, in the case of one lab, it noted that the region was undergoing severe economic problems and yet proposed no specific programs to deal with that, such as how assisting districts cope with declining revenues.

3. The panel felt that the indirect service strategy, known as "with and through," needs further examination. Created by the Department in connection with the recompetition of the labs in 1985, this strategy appears to confound the issue of how one measures the impact of the labs, especially in the area of school improvement. We also felt that in some areas this strategy is easier to follow than in others, simply because of the presence of a wider range of partners. We also noted that this strategy subjects the labs to influences beyond their control, such as was the case in California when the Governor cancelled the technical assistance center program which was a major component to the strategy of the lab in that region.

4. The LRP is concerned with how labs deal with the question of whether they should be pro-active or reactive in their region. Should the labs create a mission in advance and then impose that in the service area, or should they react only to constituents? And, if the labs are reacting to

concerns expressed in the field, are they casting solutions in terms of the staff and resources they have available, or do they make judgements and seek solutions that are without regard to their existing staff?

5. To what degree should regional labs have some national identity for a specific area, such as higher order learning skills? Is this desirable, realistic, or even achievable? The panel was also concerned that there appears to be almost no collaboration between the labs and other ED funded resources (see table). Nor did there appear to be coordination within ED between the various offices responsible for these operations. We are concerned that, from the viewpoint of the potential recipient in an LEA, it must be very confusing to deal with this variety of Federally-sponsored activities.

6. The LRP is concerned with collaboration among labs. Task five of each contract calls for that collaboration, as well as with the OERI-funded centers, and yet there appear to be few incentives for that to occur.

7. In the reports the LRP received from the site visit teams, we saw very little evidence of services being provided to non-public schools, even though they represent a considerable portion of the enrollment in some regions. We also found little evidence of the participation of non-public school representatives in policy councils of the labs.

8. A constant theme which appeared in many different ways, related to the over-regulation of the labs. The degree of reporting to OERI seems excessive. In addition, the use of a contract, while appropriate in some ways, leads to greater specificity by OERI at a time when greater autonomy might be in order. The panel felt that there is currently no procurement mechanism that is really appropriate for the labs.

9. Another area of concern to the LRP involves the relationship between OERI and non-OERI funded activities. Several of the labs have become quite

TABLE 1

Other Assistance Resources Funded By the U.S. Department of Education With Whom Regional Laboratories Might Collaborate

Office/Activity	Funding ($ in millions)
Educational Research and Improvement (OERI)	
Educational Research Centers (18)	$ 17.8
ERIC Clearinghouses (16)	4.8
National Diffusion Network (NDN) State Facilitators (53)	4.8
Leadership in Educational Administration Development (LEAD) Program Centers (51)	7.1
Elementary and Secondary Education (OESE)	
Chapter I Technical Assistance Centers (4)	3.6
Indian Education-Regional Resource Centers (5)	2.2
Drug Free Schools Centers (5)	8.8
Special Education and Rehabilitative Services (OSERS)	
Regional Resource Centers (5)	2.2

TABLE 1 (continued)

Other Assistance Resources Funded By the U.S. Department of Education With Whom Regional Laboratories Might Collaborate

Bilingual Education and Minority Language Affairs (OBEMLA)	
Multi-Functional Resource Centers (16)	10.0
Evaluation Assistance Centers (2)	0.7
Bilingual Education Clearinghouse	1.0
Civil Rights (OCR)	
Desegregation Assistance Centers (10)	8.2
Vocational and Adult Education (OVAE)	
National Center for Research on Vocational Education (NCRVE)	6.0
Community Coordination Centers (6)	0.8
Total Funding	$ 78.0

The regional offices of the Department (Secretary's Regional Representatives) are also resources with whom the labs might work.

entrepreneurial in their behavior, aggressively seeking other sources of funding. Other labs have "stuck to their knitting." What is the right model? And, is OERI, through its institutional support of the labs, underwriting unfair competition when the entrepreneurial labs seek to compete against other organizations that do not have such an arrangement with the government?

10. There is a great deal of difference in the organizational maturity of the labs. The newer labs have a cash flow problem that has been exacerbated by the Department. Labs need some level of fees since there are some costs that are not allowable, like interest on loans to carry a lab until the next Federal check arrives. By not providing fees, especially to newer labs, they risk starvation. We also believe that it might be possible for older labs to help newer labs get established. Finally, in this area we felt that the problem of how to deal with matching a staff to the changing needs of a region is a major concern.

11. Finally, in this section of the report, the LRP dealt with specific concerns regarding three newer labs. These matters dealt with service strategies, financing, and aspirations.

RECOMMENDATIONS REGARDING THE FUTURE OF THE PROGRAM

In the final section of the report, the panel made a number of suggestions regarding the future of the program. Many of the suggestions could not be incorporated until the next recompetition, and we intend to spend more time later this year dealing with this issue in greater depth.

In brief, the panel's recommendations are:

- the Department needs to find a way to make the programmatic realities more compatible with contractual requirements;

- the Department needs to strengthen the Contracts Office so that the long procedural delays that have been encountered are eliminated;

- further examination must be given to problems of financing, especially cash flow and fees;
- the entrepreneurial nature of the labs must be examined to determine what is appropriate;
- the paperwork generated must be made more succinct and clear in terms of purpose and need;
- the implications of the with and through (indirect service) strategy must be examined;
- assumptions about the needs assessment process need to be reexamined;
- OERI must do more to provide coordination among the labs and with other ED resources; and, finally,
- OERI should conduct further examinations of the lab programs at the level of the field recipient.

As I noted earlier, the Lab Review Panel will continue to meet for the next two years, and will provide to the Department its recommendations and observations. I hope that you will find the full report of value to you and to the Subcommittee. I am available for any questions you might have.

Mr. OWENS. Thank you.
Dr. Hopkins.

STATEMENT OF JOHN E. HOPKINS, EXECUTIVE DIRECTOR, RESEARCH FOR BETTER SCHOOLS

Mr. HOPKINS. Thank you, Mr. Chairman. I am John Hopkins, director of Research for Better Schools. I am speaking to you today on behalf of the Council for Educational Development and Research, which is an association of laboratories and centers. We appreciate the invitation to participate in this hearing.

Our testimony today will address three issues: funding of educational R&D, the history of the regional labs, and the need to create new R&D institutions. First, the funding of educational R&D:

We believe that the funding for educational R&D will increase when Congress is confident that the money will be used to support legitimate activity. The legitimacy of the activities will always be in question, though, when a handful of officials accountable only to themselves, determine both the research agenda and those who will carry it out. Unfortunately, the current structure of the Department of Education does not provide any separation between these functions. As long as that is the case, the situation is ripe for abuse. The structure needs to be changed.

The Education and Labor Committee has removed the Center for Educational Statistics from OERI and given it independent status. We recommend that the Congress give to educational research the same degree of autonomy that is now being restored to the Center for Educational Statistics.

Second, the history of the regional labs: During 1966, 20 labs were given developmental grants by the U.S. Office of Education. On November 15 of that very same year, 2 weeks before the initial grants were to be renewed, the Secretary of Health, Education, and Welfare put a freeze on contract negotiation and thereby began 22 years of innumerable reviews, reconsideration, and debate about the regional labs, which continues to this day. The debate has revolved around the role of the laboratories, their individual and collective merit, regional versus national mission, regional versus national agenda-setting, direct versus indirect strategies, and the range and type of functions they are to perform, for example, R&D versus technical assistance versus service.

Along the line, all regional laboratories have been affected. Of the original 20, 14 have been terminated, and 3 new ones have been created, with a fourth one on the boards. For the continuing labs, funding has been essentially level for the last 12 years and will remain level for at least 2 more.

I have given to Mr. Peters, Mr. Chairman, copies of a table that I prepared, showing the funding of my particular laboratory. You can see if you look at the figure on the left, we are one of the original laboratories. Funding increased very quickly, and in 1972-73 we had funding of over $5 million. In the course of 3 years after that, the funding was cut in half. It dropped by $2.5 million. So that for the past 12 years we have essentially been level funded. I have made no effort to take into account the effects of inflation, but I think we all know what the impact of inflation has been on these dollars.

On the right-hand side it shows that at one point we had 153 full-time staff persons. That has declined now to the point where we have 48, and we assume that we will continue to decline as we continue with level funding.

The comment was made yesterday time and again that the institutional support is consuming an ever greater proportion of the funds that are available for educational R&D. And that is correct. But I do want it to be clear that the laboratories, the institutions, have not been growing increasingly as a consequence. We indeed have been declining and have not been experiencing increases in money or staff. It is a function of decline in the overall dollars, not in increased dollars going into our institutions.

At the same time that this has been occurring, expectations have continually expanded for the services we will offer and the groups we will serve. I will just use my institution as an example; 2½ years ago, we had previously been serving the States of Pennsylvania, New Jersey, and Delaware. At that time, added to our responsibility was the State of Maryland and the District of Columbia, and we received not a single additional dollar to compensate for this increase in responsibility.

Following all of this, we believe three things are clear:

One, the concept of regional labs remains as viable today as it was 22 years ago; two, the laboratories perform a valuable role which can be performed by no other existing educational organization or agency; three, the laboratories could do more with additional funds, but they are not now capable of engineering the kind of fundamental change people are seeking in the Nation's educational system.

Which brings me to my third point: the need to create new R&D institutions. When President Lyndon Johnson was designing his Great Society, he asked John Gardner, president of the Carnegie Corp., to look at the needs of education. Gardner and his colleagues told President Johnson that he needed to create national laboratories like the great institutions developed by the Atomic Energy Commission, the Argonne and the Brookhaven labs. These new organizations, Gardner said, and I quote, "should pay ample attention to research, but their central focus will be on the development and dissemination of educational innovation."

We think it's time to seriously consider creating such institutions, whether they be called quangos or national labs. Investigators continue to tackle educational problems separately as though there were no relationship between and among them. But it is clear that there is an important relationship.

We need institutions that are large enough and strong enough to take on entire problem areas, not just pieces of them, and develop solutions powerful enough to succeed in large numbers of schools and classrooms in this country for the benefit of tens of thousands of its students. We don't know exactly what these new labs should look like, but to convey a sense of the magnitude we have in mind, we suggest the following:

One, there should be perhaps four to six of them to start with; two, they should each be funded at $6 million to $8 million annually, with long-term funding, on the order of 10 years, so they can attract the interdisciplinary talent needed to address the critical problems facing our educational system; and three, they should be given a high degree of independence to go wherever the problems lead them.

Four, they should emphasize development and dissemination. Existing restrictions on curriculum and major program development should be lifted.

Five, they should supplement the existing regional labs, R&D centers, and ERIC clearinghouses, not supplant them.

We respectfully recommend that this subcommittee take the lead in securing renewed investment of funds and talent in educational R&D. Specifically, we recommend the subcommittee take the following three steps:

One, obtain an appropriation which will enable the department to commission the National Academy of Education, the National Academy of Science, and similar organizations to study new institutional arrangements for conducting educational R&D. Widespread public comment should be obtained on the results of these studies.

Two, if a new arrangement emerges, the subcommittee should seek to have the new institutions authorized and funded.

Three, once created, the subcommittee should nurture and provide some stability for them to give them time to deliver on their promise.

In closing, Mr. Chairman, may I say that the members of the Council for Educational Development and Research appreciate this opportunity to share our views with the Select Education Subcommittee. Thank you.

[The prepared statement of John E. Hopkins follows:]

NATIONAL EDUCATIONAL RESEARCH AND DEVELOPMENT LABORATORIES

An Idea Whose Time Has Come

Testimony Presented to the
Select Education Subcommittee
of the
House Education and Labor Committee
U.S. House of Representatives
Washington, D.C.

Major R. Owens, chairman

April 21, 1988

Delivered by
John E. Hopkins, executive director
Research for Better Schools
Philadelphia, Pa.

on behalf of the

Council for Educational Development
and Research
Washington, D.C.

Introduction

The Council for Educational Development and Research is pleased to present testimony before Chairman Major Owens and his Select Education Subcommittee.

The Council is a Washington-based, nonprofit education association. The members include regional educational laboratories and university-based research centers.

In his letter of invitation to us, Chairman Owens cited the pitiful condition of federally funded educational research and development. The enterprise has never been adequately funded. But never has the inadequacy been so glaring. While education emerges as the priority of politicians, the subject of numerous national commissions, and the hope of a nation, educational R&D continues to languish.

The late 80s should be growth years for educational R&D. Blue-ribbon education panelists have said "the nation's at risk." The status quo isn't acceptable anymore. Change isn't desired, it's demanded. More of the same won't do. Policymakers are talking about "new approaches" and "restructuring." And they're serious about it. The need for educational R&D hasn't been this obvious since Lyndon B. Johnson wrote similar goals into his declaration of war on poverty over 20 years ago.

But educational R&D in the late 80s finds itself waiting for a mobilization call. The nation may be at risk. But the annual appropriation for The Office of Educational Research and Improvement (OERI) suggests otherwise.

Chairman Owens' letter hints at some possible reasons for this situation. He mentions the acrimonious relationship between the educational research community and the federal research leadership. And he wonders if the current educational R&D structure is sufficient to meet the challenges posed by reform mandates. Finally, he asks if the country might not need a new research and development entity, something we suspect he believes might bring some credibility to the enterprise.

The chairman is right on the mark. There's something basically unhealthy about having the head of the Office of Educational Research and Improvement publicly exchanging barbs with the head of the educational R&D community's national association.

The current R&D structure --the regional laboratories, the ERIC clearinghouses, the university-based centers-- is certainly lean. But it includes strong, viable institutions that have twenty-some years of experience and accomplishments. The structure is insufficient for the job at hand. But it's capable of contributing far more than its current resources allow.

Finally, we agree with Chairman Owens' instinct that something new is required if we intend to realize educational R&D's promise. We need a new set of institutions. The chairman suggests a "quango" as a possibility. Perhaps. But we'd be more comfortable with something that didn't sound like a boomerang careening off a stop sign. Frankly, R&D is already the runt among the federally funded education programs. Hanging the label "quango" on it might just further erode its credibility. We'd prefer to see institutions created that reflect the nation's interest in making great strides in educational improvement. Therefore, we will advocate the creation of "National Educational Research and Development Laboratories."

Our testimony today will address three issues.

First, why is educational R&D so poorly funded? Our colleagues within the American Educational Research Association (AERA) say the fault lies with this administration's educational leadership. Those officials say it's because the educational researchers are inept lobbyists. We have a somewhat different point of view. Educational researchers could lobby like bankers and it wouldn't change the funding level of the Office of Educational Research and Improvement (OERI) if Congress doesn't trust its leadership. And clearly Congress doesn't. But we doubt if a change in assistant secretaries will be sufficient to fill educational R&D's coffers. More drastic changes are required. Congress needs to insert some checks and balances in the Department's internal decision-making structure. Without them, high-ranking political appointees will continue to use educational research as fodder for their ideological broadsides.

Second, we intend to say something about the history of the educational R&D enterprise . . . labs, centers, and the ERIC clearinghouses. These institutions have been receiving federal dollars for over twenty years. Do these War on Poverty veterans still have what it takes? We'll answer for the regional laboratories.

Finally, we want to propose the establishment of National Laboratories. The idea isn't new and it isn't ours. It surfaced originally back in the mid-60s when the Great Society planners were addressing many of the same problems highlighted by today's commissions and task forces. The government decided back then to go with "regional" rather than "national" laboratories. A decade later another group of federal planners came together and resurfaced the notion of national laboratories. In all honesty, we helped bury the concept. We saw it as a threat to the existing regional laboratories. We're older and wiser today. In retrospect, the challenge facing education probably requires both kinds of institutions.

Why Is Educational R&D So Poorly Funded?

Chester E. Finn, Jr., is the assistant secretary in charge of the Office of Educational Research and Improvement. He has written that "education researchers have few friends, few admirers, and have scored few victories in the battle for scarce federal dollars."

Richard J. Shavelson is the immediate past president of the American Educational Research Association. He has recently written: "What ails education research first and foremost is the federal government's failure, particularly the U.S. Department of Education's failure under the current administration, to provide political leadership and financial support for education research."

Both Dr. Finn and Dr. Shavelson's successor at AERA intend to appear before this subcommittee. Therefore, we'll leave it to them to pass the blame back and forth for educational R&D's woefully inadequate funding today. We'd only remind the subcommittee that federal support for educational R&D has been on the skids for decades. And while it's true that Dr. Finn has been on the field longer than most players, he's not the only one to fumble the ball trying to score points for educational R&D.

We've been agonizing over the plight of federal support for educational R&D since the mid-60s. The funding levels have never been adequate. But some years have been better than others. And it's possible to identify several factors that account for the "good" years and explain the "bad" ones.

Factors That Influence Congressional Support for Educational R&D

Administration Request - Congress doesn't seem to be terribly interested in OMB's assessment of the worth of educational R&D. Therefore, it doesn't really make much difference if the Department seeks increases or decreases in educational R&D spending. However, an interesting turn of events seems to occur whenever the administration --such as the current one-- seeks an increase for educational research but also asks for major decreases in other programs. When faced with these requests, Congress normally denies both. Educational research does best when the Department seeks an across-the-board increase for education spending.

Discretionary Spending and Earmarks - As stated, Congress tends to be distrustful of administrations that seek to curtail or eliminate popular federally funded education programs. Secretaries making such requests generally have a hard time getting Congress to provide them with discretionary money. And here's the rub for educational research: its total appropriation consists of discretionary dollars. Therefore, when an administration, such as the current one, seeks to reduce funding for popular educational programs, it has a difficult time obtaining increases for its discretionary accounts. If Congress wishes to boost spending for educational R&D and yet deny a hostile administration dollars for new initiatives, the increase is normally earmarked for specific activities or beneficiaries.

Earmarks, though, cause havoc within the educational R&D establishment. Department officials view them as personal affronts. The Department normally treats the unrequested funds as "dirty money" and considers the activities it supports as insignificant and irrelevant.

To make matters worse, federal officials frequently tell other stakeholders in the broad educational community that the research dollars would have gone to them "had it not been for the earmarks." Consequently, the research profession frequently ends up turning on itself. The resulting squabble further alienates the broader educational community. To many observers, the annual cycle for educational R&D appropriations is little more than an intramural struggle among a self-destructive set of competing research interest groups.

Federal funding for educational R&D will increase when Congress is confident that the money supports legitimate activities. The legitimacy of the activities will always be in question, though, when a small handful of federal officials, accountable only to themselves, determine both the research agenda and those who will carry it out.

A quote in a recent issue of the *Chronicle of Higher Education* says the same thing: "Congressional aides have said that federal lawmakers have refused to approve more for research conducted by individual scholars because they feared that the Reagan administration will award the money to researchers who share its political views."

Labs and Centers - That same *Chronicle* article quotes Dr. Finn as telling the AERA annual meeting two weeks ago that "laboratories and centers have been successful in winning most of the federal money for education research because they had dispatched influential lobbyists who are all over Congress." Dr. Finn frequently zings the labs and centers when expressing outrage over his inability to secure funding for his private initiatives. But his rage is misdirected.

The fact is, since Dr. Finn has been assistant secretary Congress has provided the labs, centers, and ERIC clearinghouses with exactly the funding levels requested by the Department. Not a penny more. In fact, given the recent Gramm-Rudman cuts, Congress has actually provided these institutions with less funding than the Department requested.

It is true that Congress gave the regional laboratories $4 million one year and about $3.4 million a second year to operate a new rural, small school initiative. But these funds were added to OERI's spending base, not taken from it.

Dr. Finn protests that labs, centers, and the ERIC clearinghouses have a stranglehold on his money. It's true that since Ronald Reagan was elected President --and support for educational R&D nosedived-- these institutions have commanded a higher percentage of the available research dollars. But the only thing that has shot up is the percentage -- not the actual dollars. The dollars supporting labs, centers, and ERIC clearinghouses have remained fairly constant for nearly a decade. What caused their percentage of the total to shoot up is the simple fact that the total has fallen off badly (See GAO's November, 1987 report, *Education Information: Changes in Funds and Priorities Have Affected Production and Quality*). And that's due, in large part, to Congress' basic distrust of Ronald Reagan's appointees in the Department of Education.

Congress appears willing to protect the nation's educational R&D infrastructure by maintaining level support for the labs, the centers, and the ERIC clearinghouses. But Congress doesn't appear willing to give these institutions any significant increases in funding unless, as in the case of the labs' rural education initiative, the money is somehow kept away from the dictates of the OERI leadership.

Educational R&D appropriations undoubtedly would rise if the Department and the research community supported increases for its institutional infrastructure. But that common-sense solution would deny OERI its discretionary dollars. And OERI's leadership wants nothing to do with additional dollars it can't spend to further its own agenda.

Agenda-setting - The Secretary of Education is a political animal. Bill Bennett makes no apologies for it. His predecessor, T. H. Bell, was less comfortable in the role. But he, too, acknowledged that the Reagan administration's attitudes and policies toward education influenced his behavior (see his recent book, *The Thirteenth Man: A Reagan Cabinet Memoir*).

But should such politics drift down to the Office of Educational Research and Improvement? Educational researchers would agree: "No. Decisions about what statistics to collect or what research to fund shouldn't be driven by the ideological bias of political appointees."

We have no idea how hard Secretary Bennett leans on OERI's decision-making apparatus. Actually, strong-arm tactics probably are unnecessary. Assistant Secretary Finn is so closely aligned with Secretary Bennett that the two essentially run OERI's research branch as a sideline out of the Secretary's Office.

Assistant Secretary Finn doesn't seek, nor does he want, independence from Secretary Bennett and the political winds that swirl within his office. Dr. Finn has made this perfectly clear to everyone. Besides adopting the "counselor to the secretary" title, Dr. Finn moved himself into an office within the Secretary's suite. Dr. Finn communicates with his across-town agency by electronic mail.

The two officials carried out the reorganization of OERI (or, as it might be called, the dismantling of the National Institute of Education) early in their public-service careers. In so doing, they made sure no other official had the authority or clout to interfere with their mode of operation.

The reorganization eliminated all presidential appointees below the assistant secretary and stripped the National Council for Educational Research of its policy-making responsibilities. By reorganizing, Secretary Bill Bennett and Assistant Secretary Finn eliminated everyone who might have independent authority to question or circumvent their agenda. The reorganization, in other words, created an educational "research czar" answerable only to the Secretary.

Historically, federal research officials have had to convince Congress of their independence from the Secretary to receive an adequate appropriation. Dr. Finn took the opposite tack; he embraced the Secretary and his bully pulpit approach to school improvement. The entire educational R&D enterprise suffers for it.

Some of our colleagues placate themselves by suggesting things will improve when the administration changes. Perhaps. But every Secretary of Education is going to want to use his or her research arm as an instrument to further the administration's ideology. Democrats are as likely to do this as are Republicans. Obviously, a successful research official needs rapport with the Secretary's Office. But the research branch also needs some autonomy. The definition of a good research administrator is one who can strike a balance.

Unfortunately, the current departmental structure makes it difficult for a research official to seek some autonomy. The only thing between the Secretary's Office and the decision-making apparatus about research priorities and award recipients is the Secretary's personally appointed OERI Assistant Secretary. As long as that's the case, the structure is ripe for abuse.

The structure needs to be changed. The Education and Labor Committee, as part of its deliberations on H.R. 5, has already removed the Center for Education Statistics from OERI and given it independent status. The same thing ought to be done for those activities within OERI that used to constitute the National Institute of Education (NIE).

Regional Laboratories Concept Reaffirmed, Again and Again

Someday somebody will write a book about the regional laboratories. For our purposes today we need only mention a few highlights.

The U.S. Office of Education made grants to 11 laboratories in February of 1966. In June of that year, eight more were given developmental grants. The White House announced the awards. So far so good. In September of 1966 one more grant was made, bringing the total to 20.

On November 15, 1966, two weeks before these initial grants were to be renewed, the Secretary of Health, Education, and Welfare placed a freeze on the negotiations. The laboratories, not yet a year old, were introduced to federal decisionmaking.

The laboratories had scarcely begun and already their critics were at their heels. Most of these critics were within the government, some from the Bureau of the Budget, today's Office of Management and Budget. Others were influential outsiders, including several who thought all along a few "national" laboratories would be a better idea than 20 "regional" ones (more on this later).

Francis S. Chase, then dean of the Graduate School of Education at the University of Chicago, was called in to conduct the first of what turned out to be many laboratory reviews.

Chase found much to admire, if not a few things to correct. In a nutshell, he said to the HEW Secretary:

> The labs must concentrate on the processes that have been missing in education and that have prevented the systematic adaption of knowledge and technology to educational use through a set of closely related processes ranging from the design of models and prototypes through the successful modification of materials, technologies, strategies, and systems for the achievement of specified effects. They must view research and development as a closely integrated system for producing specified changes in educational institutions and processes. The end products of laboratories must be the development of tested products, operable systems, or other demonstrably useful contributions to the improvement of educational institutions and processes.

HEW Secretary John Gardner bought Chase's assessment and the labs were given their funding. Others within the Department, Bureau of the Budget, and the White House remained skeptical, however. By 1968 the debate about the worth of regional laboratories had reached Capitol Hill. Congress responded to the uncertainty by appropriating only level funding for the laboratories. Faced with this loss of momentum, the Office of Education brought in consultants to finger the "weaker" institutions. Five were then terminated. (This cannibal policy haunted the labs throughout their early history. When money was tight, a review team would be assembled to review the laboratories. Some would end up with increases, others would be told to struggle along, and a handful would be picked clean.)

Richard Nixon's election brought a new group of policy planners to the White House and HEW's Office of Education. Key among these newcomers was Daniel P. Moynihan of Harvard. Accompanying him to the White House was one of his graduate students, Chester E. Finn, Jr. The two organized a task force that had the chore of putting together new educational initiatives.

The work of the task force is best described by Dr. Finn in his book on that era, *Education and the Presidency*. What it reveals is the total disregard the White House staff had for anything that existed before their arrival on the scene. Held in particular scorn were the Office of Education's programs. Among them, of course, the regional educational laboratories.

The White House task force came up with what it thought was a perfect approach for President Nixon to take . . . if the administration didn't like its inherited education programs, but felt powerless to get the Congress to eliminate funding for them, why not propose to start over by creating a new educational research and development thrust? Consequently, in March of 1970 President Nixon proposed the creation of a National Institute of Education ". . . that was intended to become the focus for educational research and experimentation in the United States."

The proposal didn't generate any excitement with the Congress and the White House quickly lost interest in it. Moynihan soon returned to Harvard. The idea might have died with his departure had it not been for one congressman, John Brademas of Indiana, the chairman of this Select Education Subcommittee. Congressman Brademas sponsored hearings, rallied interest groups, soothed the doubts of his Senate counterparts and, after a two-year struggle, managed to bring into being a new federal agency.

The labs couldn't have been happier. Congress made it clear that NIE was to incorporate the laboratories and centers and build on their successes. But that's not what happened.

Congress may have created NIE to its liking, but the White House still determined who would run it. And the first officials on the scene were alumni of Moynihan's White House Task Force, the very group that dreamed up NIE in the first place. Their vision of the agency didn't reflect congressional understanding. Particularly when it came to the laboratories and centers.

The history of NIE can best be told elsewhere. It's referenced here only to make the point that the laboratories never had an easy go of it. The NIE officials, much as their OERI counterparts today, wanted complete flexibility to design their own program and to choose their own funding recipients. Federal research and development policy, as far as they were concerned, was best dictated from Washington. Regionally governed laboratories had no place in their scheme of things.

Congress quickly soured to the arrogance of NIE. In two years the new agency's appropriations dropped 50 percent. By the third year the Senate had voted the agency no money at all. The Senate Appropriation Committee recanted in conference only because it didn't want to eliminate the laboratories, centers, and ERIC clearinghouses. But NIE received no new dollars for new initiatives. In response, NIE began to turn on its inherited institutions. Budgets for labs and centers were cut to free up dollars for new activities. Finally Congress intervened and started providing appropriation setasides to these institutions to keep them from being destroyed by NIE. The intervention came too late for several of the institutions: By 1975 only 7 of the original 20 regional laboratories remained in business. Three of the original 12 centers were gone and a handful of the ERIC clearinghouses had been eliminated through consolidation with others. Educational R&D was at its lowest ebb.

In 1976 Congress reauthorized NIE. This time the Select Education Subcommittee and its counterpart in the Senate took great pains to ensure the continued viability of the laboratories and centers. They were written into the law and given a measure of independence from hostile NIE officials.

As part of the authorization, Congress created a Panel for the Review of Laboratory and Center Operations. It did an extensive, year-long study of the labs and centers and released a report to Congress that summarized its content in its title: "Laboratories and Centers Need To Be Strengthened."

If there ever was a heyday for the labs, it came with the release of the Panel's report. Its distribution coincided with the arrival of a new team of presidential appointees within NIE. They took the report to heart and eventually entered into five-year contracts and grants with the laboratories and centers. The year was 1979. The next year the American public elected Ronald Reagan president. The heyday was over.

The Budget Reconciliation Act of 1981 had a profound impact on federally funded educational R&D. The administration's proposed legislation capped NIE's funding at about a third of its current level and, in the process, eliminated all funding for the laboratories and centers. Thanks to this subcommittee and its Senate counterpart, the labs, centers, and ERIC clearinghouses survived. But that's about all that could be funded within NIE's reduced authorizing ceiling.

Secretary T. H. Bell, acting on orders from the White House, continued to go after the laboratories and centers. He wanted the dollars tied up in their awards for new initiatives sought by the White House. Consequently, he announced in 1981 that the five-year awards held by the labs and centers would end two years early.

The congressional appropriation committees had a different idea. Already fed up with the calibre of leadership within the Department's research agency, Congress ordered Secretary Bell to honor the lab and center contracts and grants.

Secretary Bell carried out congressional intent. But he did insist upon recompeting the contracts and grants held by the laboratories and centers.

That competition occurred in 1985. Thanks to congressional intervention, the Department was ordered to increase the number of laboratories to provide R&D services to all parts of the country. Consequently, nine laboratories emerged from the competition: three new ones and six incumbents.

The competition was well done. With Congress providing oversight, the Department wrote a reasonable RFP and conducted a fair and open process.

The competitors were allowed to propose work based on regional needs, not federal fiat. And each was told to:

- Focus on school and classroom improvement
- Feature dissemination and assistance strategies
- Engage in applied research and development that supports improvement
- Serve designated regions of the country
- Have independent governing boards
- Be part of a nationwide system.

The winning labs were encouraged to work "with and through" other organizations. These include organizations that provide improvement assistance directly to schools and classroom teachers. The assumption behind this policy is simple enough: the labs are too few in number to provide hands-on assistance to every local agency that may want it.

Many of the incumbent laboratories had been large product developers. Many had developed and/or field tested curriculum. No longer. The RFP stated: "Laboratories may not use NIE funds to engage in long-term curriculum development efforts." Related to this directive, the labs were instructed to be "regional" rather than "national" in their orientation.

Dr. Finn became OERI's assistant secretary at the start of President Reagan's second term. He arrived too late to interfere with the laboratory competition. But he was present when the awards were announced. However, he took no credit for the competition and suggested that had he been in office when the process started the outcome might have been different.

As the laboratories neared the end of the second year of their five-year awards Dr. Finn ordered another review of the institutions. Its chairman, Christopher Cross, intends to appear before the Subcommittee during this hearing.

Among other things, Finn's review panel raised questions about the "with and through" strategy and the strict regional focus. The Panel commented:

> The 1985 recompetition resulted in a transition of laboratories from institutions which conducted some significant R&D on their own, to ones providing assistance services, primarily with and through others. While the change has clear benefits, one cost is the loss of practitioner-oriented R&D that laboratories used to conduct. In part, this transition makes the choice of the R&D that laboratories incorporate in their services more critical. Based on knowledge presently available to it, the review panel is not sure that there is a sufficient locus of practitioner-oriented research emanating from other sources which the laboratories may draw upon.
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> The Panel has inquired about the extent to which labs perceive themselves as being oriented entirely to their regions, or whether they have, or should have, some national identify or outlook as well.
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> The Panel's perception is that the labs are very strongly oriented to their regions. This is a strength. On the other hand, there are some legitimate roles outside the region which labs might become involved with.
>
> One important national role might be to exert leadership in one or more areas of school improvement. This might be done through original collaborative arrangements with parties outside, as well as within, the laboratories' regions.

Twenty-three years of history and dozens of laboratory reviews point out three important facts about regional laboratories:

- The concept of regional educational laboratories remains as viable today as it was twenty years ago. However, different reviewers and federal officials would have them perform new or different roles (e.g., more practitioner-oriented research and development).

- The laboratories have found a niche for themselves. They're heavily tied to the educational community. And, with their regional boards of directors, the labs resist constantly shifting mandates and directives from Washington officials. This independence creates problems for these institutions. However, thus far Congress has ensured the labs' autonomy and provided them with sufficient funding to carry out their mission.

- Serious questions remain about the adequacy of the educational R&D system to address the task confronting it. The laboratories have an important role to perform. But they, along with the centers and ERIC clearinghouses, are not capable of shouldering responsibility for the kinds of changes sought in the nation's educational system. They could do more with additional funds. But given the history of federally supported educational R&D, additional funds of the magnitude required are probably not forthcoming.

National Laboratories - Time To Reconsider

When President Lyndon B. Johnson began designing his Great Society, he asked John Gardner, then president of the Carnegie Corporation, to head what became known as the Gardner Task Force on Education. In its report, a fore-runner to the blue-ribbon panel reports of today, Gardner wrote:

> Education needs to be better than it is . . . not just somewhat better, but a great deal better. We now know, beyond all doubt, that educationally speaking, the old ways of doing things will not solve our problems. We are going to have to shed outworn educational practices, dismantle outmoded educational facilities, and create a new and better learning environment.

Gardner and his colleagues told President Johnson that he needed to create new research institutions to help turn education around. These institutions, said the report, should be national laboratories. "As we conceive them, the laboratories would be more closely akin to the great national laboratories of the Atomic Energy Commission (e.g., Argonne lab outside Chicago and Brookhaven lab on Long Island) and should share many of their features."

These national laboratories, said Gardner's Task Force, "should pay ample attention to research. But their central focus will be on the development and dissemination of educational innovations."

Gardner went on to become Secretary of Health, Education, and Welfare. Meanwhile, staff within the Office of Education began playing with the idea of laboratories and emerged with a proposal for 20 regional institutions rather than the handful of national laboratories envisioned by the Task Force.

Reasons vary as to why the laboratories became regional rather than national. One high-ranking HEW official at the time said it bluntly: "Our labs are going to be pork barrel. Every congressman is going to want one in his region." He was probably partially correct. It was no accident that a regional laboratory and an R&D center ended up in President Johnson's hometown of Ausin, Texas. Or that a lab and a center were established in states that sent to Congress the chairmen of the Senate's Appropriation Committee and Labor and Human Resources Committee.

But others present at the time of the decision say multiple factors went into the decision. Some argued for a large number of laboratories spread across the country to enable them to work closely with state and local interests.

Besides, some Members of Congress had a concern about "national" laboratories. They raised the specter of federal control over education that "regional" institutions didn't seem to trigger.

Many of those who advocated national labs were not pleased with the decision to go regional. And they made life miserable for regional labs, accusing them, among other things, of being too closely identified with the people who needed to be improved.

Several of these pro-national and anti-regional laboratory observers resurfaced with the creation of the National Institute of Education. Consequently, three years after NIE came into being, a blue-ribbon panel was pulled together to look again at the country's research and development needs. Roald F. Campbell, former dean of the Graduate School of Education at the University of Chicago, chaired the panel.

The Campbell panel didn't trash regional labs. To the contrary, it said:

> Failure of the laboratories to reach some goals held for them at the outset seems to us chiefly a failure of the government to guide and encourage them toward these goals, not a failure of the concept. The concept of a specialized, separate agency in touch with schools but able to retreat from direct service to test ideas and develop new programs still seems distinctive and sound and worthy of extensive support.

Nevertheless, the Campbell panel went on to recommend that NIE conduct a review of the existing labs to identify "a small number" that could be designated "large, high-quality national R&D organizations" and share certain features:

- Emphasis on a single mission, closely tied to one of NIE's national R&D priority areas;
- A purpose of following ideas from inception to utilization, with specific tasks along the way firmly agreed to in advance;
- Stable funding for three to five years, at a level of at least $3-$4 million per year;
- Funding chiefly from a single source -- the NIE, with other funds subject to review and possible limitation to maintain essential mission-focus;

- Protection from demands to give local services unrelated to field activity that is part of the R&D mission; and
- Close ties to the major sponsor--NIE, for review of the entire institution at intervals during and at the close of the contract term, including review of finances and management, as well as program.

Some of the existing labs were excited about the prospect of qualifying for "national" status. Others wondered where the money would come from. The Campbell task force also worried about the funding, having observed NIE's inability to win appropriations from Congress. The task force, though, was prepared to sacrifice the existing labs and centers.

"The consequence of our recommendation to create national laboratories may mean that some existing labs and centers actually close, or must reorient their work away from R&D in areas supported by NIE. We are prepared to accept that."

Needless to say, the recommendation made the regional laboratories nervous. But they had a strange ally: the senior staff within NIE were not fans of the national labs either. The staff had plans on the drawing board for a host of small, easily controlled studies and projects. National labs could potentially absorb all these dollars and more.

The National Council on Educational Research, the Institute's policy-making body, which included Chester E. Finn, Jr., warmly embraced Campbell's recommendation. And it wasted little time in implementing a policy that called for a review of the existing laboratories and the subsequent naming of no more than four as national laboratories.

The Council's action triggered a top-level meeting between NIE officials and the laboratories. Meeting in St. Louis on September 27, 1975, they discussed their mutual concerns about these new national labs. Congress had just set-aside funds for "regional" labs and centers in the FY 86 appropriation bill. Consequently, NIE Director Harold Hodgkinson agreed that "additional funds required for the conversion of a lab to 'national' status following NCER policy will not be considered a part of the floor funding for labs and centers."

The NCER reluctantly concurred that national labs would have to await higher appropriations. Then the issue became moot entirely when, in 1976, this subcommittee and its Senate counterpart reauthorized NIE and said specifically that "regional" as opposed to "national" laboratories would be funded.

The possibility of national laboratories didn't surface again until the *New York Times* recently published an editorial suggesting that something called a "quango" be created to "build a base for progress in education."

The editorial caught Chairman Owen's eye. And he's been asking about it ever since. One of those he quizzed about it was Dr. Finn.

Not surprising, given his vision of OERI, Dr. Finn said: "OERI, in the totality of its activities and those it sponsors, already resembles a quango." Having said that, Dr. Finn went on to say he's ". . . not convinced that the existence of such entities would lead to the kind of dramatic improvements hinted at in the *Times*. I think you should proceed with caution."

We concur with the cautionary note. But we think it's time to consider seriously creating something new a la quangos or national laboratories.

And what brings us to this point is our growing concern that we lack the collective clout to address the problem before us.

Numerous existing blue-ribbon reports and commission findings make our point. But one most recently really hit home. It's a Ford Foundation report entitled, *Toward a More Perfect Union: Basic Skills, Poor Families, and Our Economic Future.*

The authors, Gordon Berlin and Andrew Sum, remind us that we're so busy struggling with the problems of at-risk children that we've lost our perspective. Frankly, as a society we're going off willy-nilly in our efforts to do something quickly.

Here's how they put it:

> Teenage parenting, youth joblessness, and dropping out of school are closely intertwined. Yet the researchers and practitioners who work on these issues generally view them as distinct problems. Sociologists and social workers focus on the family and teenage pregnancy, educators concentrate on schooling and dropouts, and labor economists emphasize employment and training. This has led to a circle of endless 'mysteries' and 'puzzles' that has some of the finest researchers and leaders in the country concluding that we simply do not know what to do about these problems.

Do we need to look beyond two bills now pending before Congress to make our point? Both the Trade Bill and the Stafford-Hawkins Bill create new programs or expand old ones to tackle multiple ills facing at-risk children. But if the problems are related, and they certainly seem to be, shouldn't we be channeling our efforts to get at the heart of the problem?

Mr. Chairman, it's time to reconsider the national laboratory concept.

We don't know exactly what they ought to look like. We do know they must be significant enough to attract the kind of inter-disciplinary talent needed to address the critical problems facing our educational system. We figure four to six is a logical number to start with. Their individual funding levels ought to be $6-8 million a year. They should have a long-term contract with the Department. But they should be given a high degree of independence to carve out a workscope. That workscope should emphasize development and dissemination; restrictions on curriculum and/or program development ought to be lifted. And these institutions ought to be left to go where the problems lead them.

In essence, we're describing the national laboratories first broached by the Gardner Task Force and then revisited by the Campbell panel.

National laboratories ought to supplement, not supplant the existing labs, centers, and ERIC clearinghouses. We believe the national labs will undoubtedly spring from the network of regional laboratories. Frankly, it doesn't make sense to create these institutions from scratch; the problems are too immediate and the needs too great.

Nevertheless, the creation of national labs doesn't lessen the need for regional institutions. The regional laboratory concept is as valid today as it was 20 years ago. A set of regionally governed institutions is still necessary if we expect local and state agencies to receive the focused, R&D support they need for the kinds of changes society expects of them.

Recommendations

We respectfully recommend to this Subcommittee that it take the lead in addressing the challenge facing all of us who worry that we are not investing sufficient dollars and talent in educational R&D. We would recommend the following steps:

1. Examine the relationship between the Secretary's Office and the Office of Educational Research and Improvement. Would it make sense to give educational research the same degree of autonomy now being restored to the Center for Education Statistics?

2. Order the Department, through a separate appropriation, to begin a study of new institutional arrangements for the conduct of educational research and development. The Department should be commissioning outfits such as the National Academy of Science, the National Academy of Education, and others to study the idea of creating quangos or national labs. These studies ought to be the focus of Subcommittee hearings. The educational community -- researchers as well as practitioners-- should be asked to comment.

3. If a new arrangement makes sense, as we believe it would, then the Subcommittee should seek an adequate authorization and subsequent appropriation to bring these new institutions into being.

4. Once created, these institutions should be able to view this Subcommittee as its congressional godfather. The Subcommittee should nurture and protect these institutions to give them time to deliver on their promise.

Conclusion

The challenges facing education today suggest that the country ought to be investing heavily in education research and development. However, Congress has shown a reluctance to increase spending for educational R&D because of its distrust of the Department of Education. Federal administrators, in turn, bemoan the percentage of their dollars going to sustain a small but viable network of labs, centers, and ERIC clearinghouses. This circle of distrust and discrediting dooms the entire enterprise to its low status. Nothing is likely to change in the short run. What's needed to break the cycle is a new institution. Call it a quango, if necessary. Or a national laboratory. But challenge it with the toughest problems facing education. Fund it with sufficient resources to attract and hold the best talent in the country. Sign it to a long-term agreement that gives its staff time to make a difference. And throw out the rules and regulations that shackle innovation and enslave ideas to the acceptable norms of petty bureaucrats and ideologically driven political appointees.
Above all, provide it with congressional godfathers. Let the country know that these institutions are important and nobody ought to mess with them until they've had a chance to deliver.

National laboratories . . . a twenty-year-old idea who's time is now.

The membership of the Council for Educational Development and Research appreciate this opportunity to share its views with the Select Education Subcommittee.

Mr. OWENS. Thank you.

Without objection, your tables will be added to your testimony and entered into the record.

Dr. Fuhrman.

STATEMENT OF SUSAN FUHRMAN, DIRECTOR, CENTER ON STATE AND LOCAL POLICY, DEVELOPMENT AND LEADERSHIP, RUTGERS UNIVERSITY

Ms. FUHRMAN. Thank you, Chairman Owens and members of the subcommittee. Thank you very much for the opportunity to testify this morning.

I direct 1 of the 10 research and development centers established in 1985, the Center for Policy Research in Education at Rutgers University, and I speak here as chairperson of the American Research Association's organization of research centers.

There were a number of statements and questions yesterday about the achievements of research centers. I would like to focus this morning on those achievements and then move to a discussion of why centers are an integral part of a Federal research effort.

It is easy for me to speak about the achievements of the research centers, even though the translation of research into practice is not a linear process, even though some critical research surfaces problems, creates frameworks for thinking about solutions, and enlightens discussion rather than directly leading to specific interventions.

Let me cite some examples of center accomplishments without any attempt at being comprehensive.

The Center for the Study of Reading, which was much cited yesterday for the report "Becoming a Nation of Readers" has also developed improved methods for assessing reading that are now being used by several States as well as a number of teaching methods especially effective with underachieving students.

The Center for Research on Elementary and Middle Schools at Johns Hopkins University has conducted critical research on cooperative learning. The program is being used in at least 1,000 elementary schools.

The Learning Research and Development Center at Pittsburgh has developed the criterion reference test and has done significant work on higher-order thinking skills.

The Center for Research on Evaluation Standards and student testing's work has influenced writing and reading assessments in several States as well as the design of both international and national assessments; the NAEP assessment, for example.

The educational technology center has developed the "Geometric Supposer," a software approach which is spreading at the rate of 500 classrooms per month.

CLEAR, the bilingual center, has developed instructional approaches that integrate the teaching of language with subjects like math and science.

Let me move on to some of the newer centers that have only been in existence for 2 years and indicate some of the important research that they are doing.

The Center for the Study of Writing investigates writing across the curriculum, particularly in the area of science. The Center on Effective Secondary Schools has published a handbook on alternative assessment methods, alternatives to standardized testing. The National Center for Postsecondary Governance and Finance's work on tuition savings plan has influenced policy deliberations at the State and institutional levels. The Center for Education and Employment has researched the skill requirements of various jobs.

And finally, my own center, the Center for Policy Research in Education, has undertaken the kind of study Mr. Shanker advocated yesterday on the impact of recent reforms, and we are finding, for example, more academic coursetaking by students in the wake of high school graduation requirements but much of that coursetaking in basic and general level courses, a finding we are continuing to explore.

These are just some of the centers and some of the achievements. As I mention in my testimony, we will be gathering some letters from practitioners and policymakers who have used and appreciated the work of centers and submitting them to the subcommittee, and we urge the subcommittee to solicit opinions from those in the field about the utility of research.

I would like to move on now to the question of how centers fit into the full strategy of research and why they are an integral part of any full research effort.

Centers are intended to conduct mission-oriented, systematic, programmatic research. They address major educational issues or problems, like the nature of student learning or how a school's context affects teaching, that are profitably attacked by a series of coordinated research projects rather than isolated studies. They draw on the perspectives of varied disciplines. They are long term in nature so that they can conduct longitudinal studies as well as studies that build on one another to progressively address a problem. They have the capacity to conduct both basic and applied research in the same setting.

Because they are designated hubs of research activity around a problem area, they can attract the sustained involvement of senior scholars and provide national leadership in a particular research activity. And centers also have mechanisms for disseminating and for collaboration with practitioners and policymakers to facilitate the translation of research into practice.

While centers fully support a balanced portfolio and urge increased funding to support other efforts such as field-initiated research, the advantages of research organized around centers that I have just cited argue for the inclusion of centers as a part of any Administration's research strategy.

There are a number of concerns that centers consider particularly important that I would like to raise in conclusion:

Centers support widespread consultation with the field with the research and practitioner and policymaker community on the definition of missions for new centers, when it comes to major competitions and in between major competitions when new centers are created.

We feel that centers need to be of sufficient size to execute the research, dissemination, and leadership activities integral to the definition of a center as a national leadership effort. There is no specific dollar amount that could be attached to this concept of sufficient size, but certainly there needs to be enough to create a critical mass around which several integrated projects and several senior scholars can engage.

We support rigorous peer review. We applaud the agency for its efforts in the 1985 competition in regard to peer review, and we support the paying of peer reviewers so that senior scholars can be attracted to this effort.

We appreciate the review and monitoring of our work that OERI engages in, and we especially appreciate professional relationships with the individuals who serve as liaisons to our centers and urge that funds be provided for travel for the liaison so they may visit our center sites and attend the meetings we have with practitioners and policymakers and with the research community.

We reiterate our support for the balanced portfolio and for increased funding to achieve a variety of research strategies. We believe that skimping on existing important projects is not the answer to expanding research activity.

Finally, I would like to reiterate Mr. Shanker's suggestion of yesterday for a study of the structure and governance of educational research at the Federal level, drawing on the experience of other agencies such as NSF and the National Institutes of Health.

Thank you very much.

[The prepared statement of Susan Fuhrman follows:]

Testimony Presented on Behalf of the

American Educational Research Association's Organization of Research Centers

by

Susan Fuhrman, Director
Center for Policy Research in Education

to the

United States House of Representatives
Subcommittee on Select Education

Thursday, April 21, 1988

Greetings, Mr. Chairman and members of the Subcommittee on Select Education. I am Susan Fuhrman, Director of the Center for Policy research in Education at Rutgers University, and Chairperson of the American Educational Research Association's Organization of Research Centers (ORC). I am here today on behalf of the national research and development centers which are supported by the Office of Educational Research and Improvement (OERI) and which together constitute ORC. I would like to offer a brief account of the history of federally-funded education research and development centers, and then focus my testimony on five major questions: (1) What is the scope and nature of a research center? (2) What are some of the accomplishments of research centers? (3) How are research centers created? (4) How can centers best relate to OERI? (5)How can centers fit into the full panoply of education research strategies?

Prior to the center competitions in 1983 and 1985, the National Institute of Education's (now OERI) national research and development centers had not been openly competed since their inception some twenty years ago. In the early 1980s NIE exerted considerable effort to establish peer review procedures for the conduct of national competitions for the centers. More than 380 organizations attended public hearings across the country during 1983 and 1985. NIE convened study groups comprising 125 researchers and educators to review the results and to recommend mission areas for centers, which were later more fully developed by NIE staff.

NIE next consulted with experts in the research community on the design of a peer review system. NIE also turned to the research community for help in identifying potential peer reviewers. AERA contributed the names of more than 300 researchers willing to assist in the peer review process. The centers created through that competition are listed in the appendix to this testimony, along with the new centers created since that time.

The Federal Government and the educational research community have a lot invested in the integrity of the competitions and the quality of the award winners. We are pleased, therefore, to have this opportunity to report on our progress and to offer our opinion about the critical issues related to the establishment and maintenance of a strong federal educational research effort.

What is the Scope and Nature of a Research Center?

Research centers are intended to conduct mission-oriented systematic, programmatic research. They address areas of inquiry that constitute major educational issues and problems, such as the nature of student learning and the way a school's context interacts with teaching. Centers provide a mechanism for addressing such significant issues with a program of integrated research strategies that draw on the perspectives of varied disciplines yet complement one another.

Because centers have a relatively long life (five years for current OERI centers), they can develop research that is longitudinal as well as design studies that build on one another in a way that progressively narrows in on key research questions. They have the capacity and flexibility to conduct both basic and applied research in the same setting.

Because centers are designated hubs of research activity around particular problems, they can attract the sustained participation of senior researchers and provide national leadership in both substantive and methodological areas. Centers also have mechanisms for actively disseminating findings and through various dissemination and advisory activities create long-term interaction with practitioners and researchers. All centers have national advisory panels that contribute the expertise of practitioners and policymakers as well as outside leading scholars to the design and oversight of center activities.

These characteristics suggest that, while there may not be a specific minimum dollar level that can be associated with a center, there must be sufficient resources to support a critical mass of scholars over a sustained period. A center, in contrast to a study, should involve several integrated projects conducted by multi-disciplinary teams. Resources must also be available to support networking and dissemination activities in addition to the research. ORC members feel that several new centers, called mini-centers because of their low level of funding, address mission areas worthy of larger scale examination. Some of the mini centers exist for only three years; all lack sufficient support to conduct a full range of research, dissemination, and leadership activities integral to the nature of centers. We feel that the full-scale approach to research and leadership responsibilities are essential components of national centers focusing on national problems. Reductions in size, scope, and expectations of centers provide incomplete coverage of vital issues.

What Have Research Centers Accomplished?

ORC is pleased to testify to the progress of its members in contributing to the educational knowledge base and in effecting practice. It should be noted that the translation of research into practice is a complex process that is difficult to track in linear fashion. Research can influence practice and policy in a number of indirect ways, for example, by surfacing problems, developing frameworks to assist people in thinking through solutions, and enlightening discourse about education improvements. It can also influence practice more directly by developing and testing promising improvements, and in a more applied fashion, examining the effectiveness and feasibility of various research strategies that progressively lead to more finite and definitive improvement strategies.

Each of the national centers won an award through a well-contested competition and represents important, quality research efforts. Some have existed longer than others, and the levels of funding as well as the specific nature of the inquiries conducted vary considerably.

However, each is making important contributions to knowledge and practice. Without any attempt to be comprehensive, let me offer some illustrations of center contributions:

- The Center for Research on Elementary and Middle Schools at Johns Hopkins University, and its predecessor NIE center,has conducted research over the past decade on cooperative learning instructional practices. This research has lead to the development of processes now used in mathematics, language arts, and other subjects in elementary and secondary schools nationwide. Just this past year, more than 10,000 manuals for using cooperative learning in classrooms were requested by teachers and administrators, and the commercially published cooperative learning math program was used in approximately 1,000 elementary schools, grades 3-6.

- The Center for the Study of Reading at the University of Illinois has developed and evaluated innovative teaching methods to help children at risk of educational failure, including: easy to read books for parents and Headstart children; improved comprehension teaching methods for elementary and junior high school students; methods for helping underachieving students discern and use the organization provided in textbooks to better learn and remember what they have read; and improved methods for assessing student reading ability. The nationally-disseminated report, Becoming a Nation of Readers, was written at this center. Approximately 175,000 copies have been requested and distributed.

- The Center for Research on Evaluation Standards and Student Testing, CRESST, at the University of California at Los Angles, has conducted research that has directly influence testing practices. In states such as Illinois and California this research has been central to the development of reading and writing assessments, as well as to establishment of procedures for statistically presenting and analyzing such results. The center's writing assessment work provided the technical core for the IEA international comparison. CRESST has also provided technical assistance to the Center for Education Statistics on NAEP and other quality indicators, particularly in NAEP redesign, analysis, and interpretation. Its earlier NIE supported work resulted in sales of over 150,000 of the TEST EVALUATION KIT, a product designed for school districts, health, and social service personnel.

CRESST, is also collaborating with the National Council of LA RAZA and the National Urban League in adapting these materials for use in community-based programs for at-risk students.

- The Educational Technology Center at Harvard University has created the Geometric Supposer, a software package based on the Center's research. The Geometric Supposer provides a software environment that allows youngsters and teachers to make and explore conjectures in Euclidian geometry. Intellectual authority in the classroom is now based on argument and evidence rather than assertion, and everyone learns that mathematics is not a spectator sport but a live, growing discipline. ETC instructional methods based on this finding are spreading across the country at a rate of 500 classrooms per month.

- Work at the Learning Research and Development Center of the University of Pittsburgh includes: a) the development of the concept of criterion-referenced testing; b) work on decoding in reading and on vocabulary development that has reached practitioners in curricular and computer instruction programs and through the 1985 NIE/NAE report *Becoming a Nation of Readers*; c) a national conference in 1978 on higher order thinking skills that brought together teachers, the major developers of thinking skills programs, and cognitive scientists and that yielded a much cited two-volume report; d) programs for various sectors of special education, including a classroom management scheme for mainstreaming and a program of school survival skill for learning-disabled and socially-emotionally disturbed children; and e) a model approach to school evaluation that lays out tactics for monitoring and tailoring the process to individual systems and institutions.

- Research conducted at the National Center for Postsecondary Governance and Finance at the University of Maryland has included work on tuition savings plans that have influenced legislative considerations in several states and policy deliberations at several private colleges and universities. The Center's study of factors that most affect minority degree achievement has enjoyed widespread attention.

- Finally, the Center for the Policy Research in Education that I direct has published reports and worked with policy makers to understand the educational and feasibility issues involved in developing educational indicators, designing early childhood programs and crafting public school choice programs, among other issues. Our long-term study of the education reform movement is leading to findings about the impact of new student standards, such as graduation requirements, on student course taking in academic subjects.

The work of the centers is important to the field. While ORC has not undertaken a systematic survey of user reactions I will be happy to provide the Committee with a collection of letters from practitioners and policy makers who have taken time to express their appreciation for our efforts.

How Are Research Centers Created?

As originally defined by NIE, centers are established around critical research priorities. The specific center missions designed to address these priorities should be identified by OERI through extensive consultation with key constituencies: practitioners and policymakers who identify problem areas and needs; and scholars who identify research gaps, the problem areas most amenable to programmatic research approaches and the most promising areas for the building existing research.

There should be a standard procedure for soliciting field input at various planning stages. Field consultation should start at the time when OERI begins to identify missions for major new competitions of several centers, such as the competition that will occur in 1990, or when it believes that new research issues merit the creation of additional centers in between major competitions. The process for involving researchers and practitioners in the definition of center missions, which worked so well in the case of the centers competed in 1985, should be activated each time a decision regarding center creation approaches. To our knowledge this approach has not been employed in the recent past. The existing centers have not been made aware of or involved in the mission definition process for a number of recently-created centers, in particular the several mini-centers and the Center of Civics and Citizenship Education. Researchers affiliated with the existing centers constitute a significant number of the senior scholars in education: if we remain uninformed about the process, we are left with the impression that these new center missions were defined without widespread field consultation.

The process of competing center awards once missions have been defined also deserves comment. Researchers are especially supportive of a rigorous peer review process that is managed with integrity. Speaking on behalf of several major institutions which have both won and lost in past competitions, I would like to commend the agency on its demonstrated ability to conduct fair peer review competitions, especially in the case of the centers competed in 1985. In that competition, funds were available to support the participation of recognized scholars for the time it took to give proposals the scrutiny such significant awards merit. We urge that funding be continued for the peer review activity, to assure that top researchers lend the creditability of their reputation to the process.

A final issue concerning center creation is the nature of center awards. The majority of existing center awards are grants. A grant provides the kind of institutional support that a center needs to fulfill its role and responsibilities. In contrast, some new centers are funded by cooperative agreements, a type of award used when the federal government anticipates substantial involvement with the recipient during the period of performance. ORC believes that cooperative agreements hinder creation of the stable and predicable environment that centers need to accomplish their long-term missions. Cooperative agreements should not be used to fund centers.

How Can Centers Best Relate to OERI?

Centers report many positive experiences in dealing with OERI. Collegial relationships with the men and women serving as liaison with the various centers are welcomed, as are the good efforts of OERI to keep centers informed about activities of the centers other than our and activities of other grantees, such as regional laboratories.

Concerns had been raised that OERI intended to require the equivalent of new applications each year of the five-year grant. Centers were dismayed at this prospect, not because they feared evaluation of their work, but because the enormity of the resulting drain on resources and time. Such extensive paper work would prevent the centers from doing the research that the five-year grant was intended to support.

Discussions with OERI appear to have resulted in a situation in which only new projects undertaken by a center would be subject to review as new applications. This appears to be a most reasonable procedure but questions remain in the minds of several centers about how the clarified policy will be implemented. In particular, there are concerns on the part of some Centers about the definition of "new" as opposed to continuing research. Centers welcome evaluation of their performance but wish to be free to build on existing research without fear that a modified or expanded research tack will jeopardize their funding. We are happy to continue working with OERI and anticipate that it will continue to refine the renewal procedures to provide adequate flexibility to build on existing research and to preclude the need for submitting major new applications yearly.

(Interestingly, the National Science Foundation is seeking a one-time appropriation of $150 million to provide uninterrupted five-year funding for their proposed new centers. In large part they are taking this approach to assure applicants that they will have a stable environment in which to operate if they secure a grant.)

We welcome OERI's oversight of our work through monitoring and review activities, particularly when those activities are designed to minimize intrusion and overspecification that inhibits quality research and detracts form our ability to address our mission. We strongly recommend that OERI study procedures by other federal agencies that support scholarly research. For example, OERI might study how NSF and NIH set funding priorities and monitor research centers.

A key way to improve OERI's ability to review our work is to enable the center liaisons to visit centers and field sites and to attend meetings, including the professional and practitioner meetings where we present our research, meetings of individual centers, and the collaborative meetings we hold around substantive issues. OERI currently lacks funding to support travel that would strengthen professional bonds between federal staff and center researchers.

How do Research Centers Fit into a Full Range of Research Strategies?

We are fully supportive of a balanced portfolio of research strategies. Centers conduct large-scale sustained investigation, build on their basic research activities with applied efforts and provide national leadership. By involving graduate students and supporting post-doctoral fellowships, centers make critical contributions to the training of the next generation of research scholars. Regional laboratories conduct applied research and synthesis, dissemination and technical assistance activities that facilitate the translation of research into practice and respond to specific regional needs. Field-initiated projects by individual researchers permit the field to identify important well-defined issues and add a variety of perspectives on particular problems. There is also a need for specific research projects that result from problem definition by OERI staff after surveying the needs of the practitioner world. Each approach, as well as enhanced data collection activities, is essential to the maintenance of a sound knowledge base in a field as critical to the nation's future as education.

We sympathize with OERI's frustration about operating on insufficient resources. Federal support for education research has declined by more than 70% since the early 1970's, according to the recent GAO report, Education Information: Changes in Funds and Priorities Have Affected Production and Quality. The report also highlights a significant reduction in knowledge production efforts between 1980 and 1985. There are many national educational problems currently being left off the national research agenda. For example, studies of special issues associated with schooling in large urban and small rural settings are needed. We endorse OERI's desire to launch new investigations and strongly support funding increases to enable OERI to expand federally-supported education research. We feel that the only acceptable manner of addressing additional issues is by securing additional funding to support new efforts. Skimping on existing important projects is no solution.

Finally, I wish to thank the Subcommittee and in particular Chairman Owens for taking such an active interest in educational research. I hope I have been able to provide you with a clearer understanding of what we are doing. I will be pleased to answer any questions you may have.

APPENDIX, FUHRMAN TESTIMONY

CENTER FOR RESEARCH ON ELEMENTARY AND MIDDLE SCHOOLS (CREMS)

James McPartland and Edward McDill
Co-Directors
Education R&D Center
Johns Hopkins University
3505 Charles Street
Baltimore, MD 21218
(301) 338-7570

CENTER FOR THE STUDY OF EVALUATION (CSE)

Eva Baker, Co-Director
UCLA
Los Angeles, CA 90024
(213) 825-4711

Robert Linn, Co-Director
Center for Student Testing,
Evaluation and Statistics
270 Education Building
1310 South Sixth Street
Champaign, IL 61820
(217) 333-3770

CENTER FOR THE STUDY OF LEARNING (CSL)

Robert Glaser and Lauren Resnick, Co-Directors
Learning, Research, and Development Center
University of Pittsburgh
3939 O'Hara Street
Pittsburgh, PA 15260
(412) 624-7485

CENTER FOR POLICY RESEARCH IN EDUCATION (CPRE)

Susan Fuhrman, Director
Eagleton Institute of Politics
Rutgers State University
Woodlawn/Neilson Campus
New Brunswick, NJ 08901
(201) 828-2210

CENTER FOR THE STUDY OF READING (CSR)

Richard Anderson, Director
University of Illinois
51 Gerty Drive
Champaign, IL 61820
(217) 333-2552

CENTER ON EDUCATION AND EMPLOYMENT (CEE)

Sue E. Berryman, Director
Teachers College
Columbia University
Box 174
New York, NY 10027
(212) 678-3091

CENTER ON EFFECTIVE SECONDARY SCHOOLS (CESS)

Fred Newmann, Director
Wisconsin Center for Educational Research
School of Education
University of Wisconsin
1025 West Johnson Street
Madison, WI 53706
(608) 263-7575

CENTER FOR LANGUAGE EDUCATION AND RESEARCH (CLEAR)

Amado M. Padilla, Director
1100 Glendon Avenue, Suite 1740
Los Angeles CA 90024
(213) 286-1486

CENTER FOR THE STUDY OF WRITING (CSW)

Sarah Freedman and Wallace Chafe, Co-Directors
School of Education
University of California-Berkeley
Berkeley, CA 94820
(415) 642-9592

EDUCATIONAL TECHNOLOGY CENTER (ETC)

Martha Stone Wiske and Judah Schwartz, Co-Directors
College of Education
Havard University
15 Appian Way
Cambridge, MA 02138
(617) 495-9379

NATIONAL CENTER FOR POSTSECONDARY GOVERNANCE AND FINANCE (NCPGF)

Richard Chait, Executive Director
Institute for Research in Higher Adult Education
Room 4114, CSS Building
University of Maryland
College Park, MD 20742

NATIONAL CENTER FOR RESEARCH ON TEACHER EDUCATION (NCRTE)

Mary Kennedy, Director
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Erickson Hall
East Lansing, MI 48824
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CENTER FOR THE LEARNING AND TEACHING OF MATHEMATICS

Thomas A. Romberg, Director
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1025 West Johnson Street
Madison, Wisconsin 53706
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CENTER FOR THE LEARNING AND TEACHING OF LITERATURE

Arthur N. Applebee, Director
State University of New York at Albany
School of Education
1400 Washington Avenue
Albany, New York 12222
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NATIONAL CENTER FOR RESEARCH TO IMPROVE POSTSECONDARY TEACHING AND LEARNING

Joan Stark, Director
NCRIPTAL
University of Michigan
Ann Arbor, MI 48109
(313) 764-9472

CENTER FOR THE TEACHING AND LEARNING OF ELEMENTARY SUBJECTS

Jere Brophy and Penelope Peterson, Co-Directors
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College of Education
East Lansing, Michigan 48824
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ARTS EDUCATION RESEARCH CENTER

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Nursing, and Arts Professions
32 Washington Place, #31
New York, New York 10003
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Theodore Zernich,Co-Director
University of Illinois at
Urbana-Champaign
College of Applied and Fine
Arts, 105 Davenport House
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Champaign, Illinois
61820-6219
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RESEARCH SYNTHESIS CENTER IN THE TEACHING, LEARNING, AND ASSESSMENT OF SCIENCE

Senta Raizen, Director
The Network, Inc.
290 South Main Street
Andover, Massachusetts 01810
(617) 470-1080

CENTER FOR THE STUDY OF TEACHERS AND TEACHING IN THE SCHOOL CONTEXT

Milbrey McLaughlin
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Stanford University
Stanford, California 94305
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Mr. **Owens**. Thank you.
Dr. Ambach.

STATEMENT OF GORDON AMBACH, EXECUTIVE DIRECTOR, COUNCIL OF CHIEF STATE SCHOOL OFFICERS

Mr. **Ambach**. Good morning, Mr. Chairman, and members of the staff. Thank you for this opportunity to speak on the issues of the Federal role in education research and development.

May I commend you first, Mr. Chairman, and members of the staff, for the bold vision that you are expressing in looking at these issues. Parts of the exchange this morning, it seems to me, captured that. Your discussion with Mr. Hyman about the issues of welfare reform, the questions of reforms in child care, questions of reforms in health delivery—these are all very closely related to reforms in education, and research with respect to those areas as well as education ought to be seen together.

Your exchange on the issue of the Department of Defense—not just the Department of the Army but the Department of Defense—research agenda, and seeing the several parts of Federal research efforts whole toward the objectives of education is extraordinarily important.

Clearly brought out this morning, what happens in the Department of Defense alone in education and in training research or development absolutely dwarfs anything that is available directly for education research in the other sectors of Government, and as you pointed out, we must find the ways in which we genuinely tap that source as well as the sources in other parts of the Federal Government to bring them to bear on what is happening and making changes with education.

I commend the Congress for action just taken on H.R. 5, with the expansion of NAEP and with the expansion of cooperative statistics. These basic information sources are extremely important, and we as representing the different States have been advocating that there be better information State by State on achievement or on other indicators of education so that they can be used for comparisons. And indeed we have advocated the increase in this capacity. A sevenfold increase, I might point out, has been our advocacy of this function in OERI over the past several years so that we could be in a better position nationally to compare ourselves in education with other countries.

Good steps have been taken in H.R. 5. We commend them, and we want to assure you of our support in any appropriations to make sure that happens.

The overall agenda for research and development in education is a starved one, as you have pointed out repeatedly, Mr. Chairman, and things must be done to make sure that that agenda is well nourished.

I want to make two perhaps rather simple points here this morning. You have had a rather generous spread of ideas about structure and ideas about purposes.

The first point that I would like to make is that I think it's essential that we start with what is the main objective of the research to be done, and I would like to suggest that perhaps one of the main problems in the past is that we have had very much of a scattershot approach of a lot of different pieces and bits here and there, but without a kind of an organizing concept as to what was the objective for all of the research and the development.

We don't speak about education research in terms of moon shots or in terms of Manhattan projects, as you referred to in your own statement yesterday. And perhaps it's time that what we ought to do is to pick up on something which our own council advocated last November; and that is, an objective, a broad objective for this Nation that in fact by the 21st century we have virtually a 100-percent graduation rate.

Now, there is a specific target, a target in terms of student achievement, something toward which there will be a need for an enormous amount of research, of development, of demonstration, an enormous need to pull together what the labs do, what the centers do, what can be done with a High/Scope center, what can be done with MDRC and other places.

The point is that we need that kind of organizing concept or force, and I think that if there is one thing that you can contribute through these discussions, it would be for a congressional expression of that kind of a target so that then we may see around that mission the orchestration of the different types of providers in order to assure that an agenda of research and development is carried forward.

I said it's a rather simple concept, but I think it's rather surprising, if one looks back over the years and you find that there haven't been these kinds of organizing objectives in terms of expectations for student achievement that have really driven the agenda. I think that if that were in place, you would be in a much better position to carry through what you want by way of advocacy for an increased resource and increased funding for this purpose.

The second point I would like to make, Mr. Chairman, has to do with the issue of making those connections among the research, the development, and actual practices in the field. Many of your witnesses have spoken to this, whether it be from the perspective of teachers, whether it be from the perspective of Mr. Hyman's testimony this morning, on actual demonstrations of what will work.

What I am suggesting is that unless we be certain that the research and the development agenda is driven from the perspective of the policies which we seek to put in place and in fact is driven by those who have responsibility for the policymaking and for the administration and the practice of the program, then you are not going to get a very close link between what happens in the R&D agenda and what actually happens in practice.

John Gardner was referred to just a short time ago, and the emphasis that he placed early on was not so much on invention, it was more on the transmission of innovation, so that in fact it would be well incorporated throughout a vast and a diffused educational system.

We do not have a single operational entity for education in this country. We have many different centers for decisionmaking. It makes the task of trying to orchestrate R&D more difficult, but certainly not impossible.

So, I leave you with these two key points. One is the critical importance of establishing what our objectives should be, broadly put and with great vision; and secondly, that whatever the array of different providers of R&D ought to be, that there is clearly a driving factor both in the planning and in the use of that research that comes from those who have operational responsibility as the practitioners to make sure that the educational system is in fact changing and is producing effectively.

To connect these two concepts toward the objective which we stated as a council unanimously of a virtual 100-percent graduation rate in the 21st century would, in my judgment, mean a strategy which has a combined route for funding.

In part, it is the necessity for the continuing core funding of certain institutions. You were asking questions about this this morning: 10-year frames, 12-year frames. Let's take it to 2000, a 12-year-plus frame, so that there is a commitment to those personnel and those institutions which are necessary at the core to maintain a continuity of effort. But then, I would submit, a substantial use—and perhaps the most substantial use—of the money which flows through those who have practitioner responsibility for them, in turn, to purchase those aspects of the R&D program which are most important to make sure that their mission is carried through.

That is not really happening now. It would take great care to design it. But I would like to leave you with those two concepts. It is very important for your own thinking and for deliberation on the next steps for education R&D at the Federal level.

Once again, Mr. Chairman, you and I go back to our library conferences, the White House conference, and other activities in New York. I have always admired the great vision and the great scope that you have with all of these issues. I think you have a marvelous opportunity at this point to bring that sense of comprehensiveness and scope and vision to the issue of reshaping this agenda.

Thank you.

[The prepared statement of Gordon M. Ambach follows:]

CHIEF STATE SCHOOL OFFICERS • COUNCIL

Statement before the Subcommittee on Select Education
Committee on Education and Labor
U.S. House of Representatives
Oversight Hearing on the
Office of Educational Research and Improvement

Thursday, April 21, 1988
Room 1310 Longworth House Office Building

Gordon M. Ambach
Executive Director
Council of Chief State School Officers

Education
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investment in
AMERICA

COUNCIL OF CHIEF STATE SCHOOL OFFICERS
[illegible] Hall of the States, 400 North Capitol Street N.W., Washington, D.C. [illegible] • [illegible]

Mr. Chairman, Members of the Subcommittee on Select Education, and Members of the Staff:

Thank you for the opportunity to testify on the Federal role in supporting educational research and development. I commend the Chairman and Members of the Committee for conducting this hearing and inviting a bold vision for setting the course of research and development in education in the United States and for the Federal role in supporting and conducting such education R&D.

Our Council offers strong support for increasing Federal funds for education R&D and the budget of the OERI for education statistics and assessment. Since 1984, we have urged a seven-fold increase in the budget for statistics and assessments. We commend action taken through the reauthorization of HR.5 to strengthen the National Assessment of Education Progress and the Cooperative Statistics Program. We support greater appropriations for these activities which are essential to provide information for education policy making and to help understand and compare education progress among the states and across the nations.

During your hearings, you have heard discriptions of the current Federal design for research and development in education and the structural arrangements for carrying that agenda.

You have also had discussion about types of structures--labs, centers, clearing houses, "quangos," counterparts of NIH or NSF--which might provide the most effective and efficient way to carry through the agenda. I will not repeat those comments, although I would be pleased to respond to questions on them. I would rather concentrate on two points for your consideration:

The first and most important point is the necessity for setting a clear, overall objective toward which Federal education R&D is to be be supported. To my knowledge, we have never viewed education R&D as centered on a major accomplishment, such as a moon shot, construction of a major water system, cancer cure, or Manhattan Project. We need to provide such an organizing force.

The Council of Chief State School Officers last November unanimously approved a policy statement, "Assuring School Success for Students at Risk." The lead sentence in that paper (copies of which are attached) follows: "An imperative for America's 21st Century is high school graduation for virtually all students."

I invite your consideration of taking that objective to organize the major systematic Federal R&D effort. It would be an enormous task. It would require a reexamination of the several activities of the laboratories, centers, and clearing houses now in place. It would require systematic review of R&D in Federal agencies other than the Department of Education. It would invite assembling efforts from R&D capacities outside the Government. It would force the focus on the questions of whether differentials in high school graduation rates at various schools is a matter of inequitable resources, lack of know-how, or lack of will. It would systematically connect a large number of separate probes in education, such as analysis of expenditures for the earliest years and parent education; changes in school structure and the decision-making authority of teachers; changes in content and assessment; uses of learning technologies; most effective size and arrangement of facilities.

Most important, the R&D agenda would be organized toward and driven toward a bold objective of student results! The R&D would be focused on a mission.

The second point is that R&D focused on this objective should be guided primarily by those who are in elementary and secondary education policy making and practice. For R&D expenditures to be more effective, the transmission of research results to development to practice must be more tightly made. In some cases today the connection is very good. That occurs typically where the practitioners or policy makers have commissioned the research and development related to particular problems their organizations need solved. Where these persons have little "ownership" of the R&D, unfortunately, they pay little attention to the research design or results.

The critical need now for education in the United States is for applied research, applied development, and implementation of what is known to be effective. In those places where schooling is least effective today the task of change is mainly the application of known good practice rather than invention. Management of that change, including R&D, is best done by the persons responsible for practice.

For the Federal R&D agenda, the concept applied to the major objective of virtual 100% graduation from high school would translate as follows: Provide core Federal support directly to to such centers or labs or other enterprises which make commitments to focus on the objective. This support is essential for attracting a nucleus of continuing key personnel. Provide most of the funding through operating agencies--state or local--with discretion to purchase their R&D from among these labs or centers or other research and development facilities. Do not limit use by region; let the competition work across the nation. Through the choice of provider, practicing agencies will provide closer attention to design and accountability for investment in R&D related directly to their practice. The standard by which the practitioner is to be measured is accomplishment of the objective--virtually 100% rate of high school graduation.

I am not addressing the complete Federal R&D education agenda. There are some specific short-term projects to be supported. There are also long-term programs of research in learning theory or the content of subject areas that require special, long-term, basic research support. But the concern raised in your invitation, Mr. Chairman and Members of the Committee, is for commitment to a major R&D program necessary to raise the effectiveness of American education to provide the capacity for all students to compete in a global economy and to share in the mainstream quality of American life.

To assemble the resources for that task requires first a vision of higher expectation for education achievement by the 21st Century. We would be very pleased to work with the Subcommittee to shape the Federal education R&D toward that objective. Thank you.

Mr. OWENS. Thank you.
Dr. Cole.

STATEMENT OF NANCY COLE, PRESIDENT, AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

Ms. COLE. Thank you, Mr. Chairman. I am dean of the College of Education at the University of Illinois. However, I am speaking today primarily in my role as president of the American Educational Research Association [AERA]. We are very pleased that you were able to attend the association's annual meeting last week, and I am sorry that I did not have time to meet with you at that time.

AERA finds itself very much in agreement with your characterization of the poverty of educational research. In fact, I want to focus first on a few of the problems that this poverty bind that we are in raise for us, particularly with the purpose of thinking about what that means for how we get out of such a bind and the things we need to attend to as we try to get out of the poverty bind.

First of all, the poverty bind creates too narrow a research base. Funding presently, as it has been noted, is for lab centers and a very small portion for field-initiated research. Labs and centers take the substantial portion of what is a decreasing pool of funds and in fact themselves are considerably more poorly funded than they were a decade ago.

Labs' mission at the regional mission and their tie to districts have taken a very heavy service orientation, and we end up with Federal dollars for research going primarily to centers, a small number of centers.

This funding base affects a number of things. It affects the talent that gets brought to the educational research task. And among the other things that I haven't heard mentioned that it affects is that it affects the training opportunities for the next generation of educational researchers—I think this is a major point that I will come back to later—as well as affecting the ability to attract minority scholars, for example, and other special groups to the special tasks of educational research.

Another implication of the poverty bind is that it leaves us with a beleaguered research community, and we, as you will hear in testimony from some of us who are recipients of Federal funds, that's the way we end up feeling. We face constantly threatened reductions; accountability hurdles; threats of cooperative agreements; constant expectation of accomplishing more with fewer funds; the need to expand missions, which occurs very naturally and understandably but then that comes at the expense of present missions; the constraints that will force us into situations of setting up minicenters that are really substantial deviations from the notion of the original center notion.

So, we get through a poverty bind that produces several very undesirable kinds of circumstances. And I would like to talk then briefly about the implications of some of these things for our future needs as we think about future directions.

One is the climate setting. We end up with a very negative climate, often, with respect to educational research. Educational research gets caught in the midst of bipartisan political battles, battles between whatever administration is in the White House and the Congress. And yet throughout, in spite of that, we usually share substantial concerns for the directions for improvement of our educational system and a number of critical educational problems which we have great agreement about need and attention.

So, we need to establish a kind of climate in which we can address together the particular problems on which we have widespread agreement, and instead of holding this research enterprise hostage to our fate. We need long-term directions because we need the kind of stability that the people in the last panel mentioned, in educational research.

We need a variety of kind of mechanisms to help to separate at least to some extent the research process from the political process and the political issues that are very natural to get involved in in the educational research enterprise. Some of those we have often very active in in the AERA in the competitive objective measures for the award—competitive award of funding. And there are others that might be considered as well.

A major concern, probably the most dominant one in your considerations, I hope will be with the whole structure of a support system for the strengthening and support of educational research. I think this has at least three components that I would like to mention.

One is the training system I mentioned. I think we totally neglected who's coming along to be our next generation of educational researchers, and we have some serious problems there because we have not only had a period of declining Federal resources that indirectly support funding in a number of ways, but we have had universities in a period of other kinds of financial binds that hurt that same system.

A second part of this structure has been mentioned by several people, and that is a diversified support, support for a diversified research base. I have mentioned our existing support of labs and centers, and its decrease and the problems that that causes.

In addition, what we have come to, though, with the notion of, for example, centers being our primary research mechanism is we are now asking them to play a role that they were not intended to play originally and are not adequate to be our total way to direct attention at a single problem area. We need other kinds of funding for the kinds of problem areas that we now have centers for.

Centers do not encompass all the talent in this country or all the opportunities from which we can learn about the problems, and we need to supplement centers with other forms of programmatic funding with competitive granting to supplement the center-type activity.

We, AERA, has often talked about the importance of field-initiated research. I think we have often talked about it to mean the programmatic research that I have just referred to as well as leaving funds for which scholars can submit proposals for developing areas, areas that we can begin to support the study of before they reach the level of being such substantial problems that we need to make a center to level focus to address them.

And right now, there is a real paucity of support in this country for the creative idea, the notion that doesn't quite fit with our present fairly narrow priorities, and we need more attention in that area.

Perhaps we need to consider as well the notion of research funding tied to other program areas of Federal funding in research. I fear that in many areas we don't support a research endeavor to examine what we're doing in a number of regular Federal programs.

Then, a third piece of the structure that was related to what Mr. Ambach just mentioned is the need to tie together research and practice. We cannot afford a research community ignorant of practical problems any more than we can afford a practitioner community ignorant of the findings of research, and there is much more to be done in that particular area.

Let me just mention one final area of needed direction, and I think that's in the staff development in the Education Department. We are very concerned that OERI staff, for example, cannot make site visits to the centers and labs with which they are working. They can't often attend substantive conferences.

There seems to be a real paucity of opportunity for that staff to even stay up to date in their fields. And that is a terrible handicap, I think, to the whole research enterprise, and activities that are commonplace in other Federal agencies seem to not be funded adequately in OERI, another implication of our poverty bind that we must overcome.

The theme of AERA's 1989 annual meeting is the interdependence of research and practice. It's an important theme emphasizing how good research and good practice go hand in hand, and we need much more good research.

I assure you that AERA stands ready to work with this committee in fulfilling its mandate to provide more and better research to help the Nation achieve the potential of its educational system.

Thank you, Mr. Chairman.

[The prepared statement of Nancy S. Cole follows:]

TESTIMONY OF NANCY S. COLE

to the

SUBCOMMITTEE ON SELECT EDUCATION

APRIL 21, 1988

Good morning. My name is Nancy S. Cole. I am Dean of the College of Education at the University of Illinois at Urbana-Champaign and President of the American Educational Research Association (AERA). AERA, founded in 1917, is an organization of 14,000 members dedicated to improving education through research.

I am pleased to have the opportunity to address the important issues raised by this Subcommittee. In particular, I share your desire to see educational research and development become a vital endeavor, as noted in your letter of invitation to testify here. AERA believes that, with a concentrated joint effort by the Congress, the administration, and the education research and practitioner communitites, educational research can make substantial contributions to the continuing improvement of educational practice.

What is Wrong?

What is wrong with the way the federal government is meeting its responsibility for educational research? Two things. First, there are simply not enough resources being devoted to educational research, and we have been steadily losing ground over a number of years. Second, we have not developed together a sufficiently clear vision of what we should be seeking to accomplish or how to get there. AERA views these oversight hearings as critical to setting the federal research enterprise on a more productive path. Let me briefly review the shortcomings of our present research effort.

Too Few Funds

Our expenditure on educational research is totally inadequate. Compared with other federal agencies, the research and development activities in education are pitifully small. Education research is provided less than the research funds provided in either Commerce or Transportation. Funding for research represents less than one-half of one percent of the federal expenditure for education. This is of special concern since the federal government is the primary source of funding for such research as there is no education industry investing in educational research as we find in other areas. Not only are we not producing enough research, but the recent GAO study documents the decline of research support provided by the Education Department over a number of years.

Too Narrow a Research Base

Our funded research base is too narrow. As Dr. Finn and others have noted, federal research dollars are almost totally consumed by the existing regional labs and centers. Although the existing activities are important they are grossly insufficient as "the" federal investment. Further, the $500,000 presently avialable for field-initiated research (or the one million dollars requested by the Department) is grossly inadequate. In addition to the center funding, we need major resources directed to at least two additional areas. This funding should go in part to targeted problem areas (but outside the centers) for which the best scholars in the nation can compete with diverse approaches and directions. We also need some funds not tied to preset problem areas so that new areas, novel approaches, and emerging problems can be addressed. The limitation of funding to several centers at a few institutions provides far too narrow a base.

There are other implications of the narrow research base. Researchers require substantial, in-depth study and training. The number of strudents getting strong training is almost surely decreasing as university funds for graduate student support and federal research dollars decrease simultaneously. We are failing to build our next generation of researchers. Yet we have few areas of training support for researchers through federal programs. The narrow agenda results in the best support for research training in narrow areas at a few institutions. A special case of this issue is our failure to attract minority scholars to educational research; there are insufficient opportunites for them (or anyone else) to be attracted to educational research at present.

Results of the "Poverty Bind"

The "poverty bind" that education research is in creates a number of unique and troublesome problems. One is that the agencies funded by the Department are constantly beleaguered by evaluations and by real and threatened funding reductions. It is, in the words of on Center director, "as though the Department is always wishing it had given the money to another program." We must seek adequate accountability but at the same time create a supportive environment that present monitoring procedures, threatened funding cuts, and switches to cooperative agreements do not provide.

The "poverty bind" also shows as we shift and broaden missions. We naturally try to cover as many problems as possible. However, the adequacy of resources to attack problems by these expanded missions when not accompanied by an expansion of resources must be questioned. We end up spreading our pitifully small resources too thinly to reasonably expect an impact. (The present move to "mini-centers" is a case in point. Another is the considerable reduction in funding for existing centers over the past decade.) In addition, when the administration has a particular interest, there is no way for it to be pursued without intruding upon the rest of the small, on-going enterprise.

Where Should We Be Moving?

These negative observations suggest the magnitude of our problems, but it is time to turn to positive directions. This Subcommittee seems uniquely situated to take the leadership in working toward a more productive research environment. Here are some things that we encourage you to examine closely in your deliberations.

Climate Change

First, the Select Subcommittee can provide leadership in creating a climate that will make it possible to substantially increase funding to educational research. It can do so (1) by establishing mechanisms for setting priorities and realistic funding targets for those priorities, (2) by marshalling bipartisan support for these directions, and (3) by ensuring that objective procedures for the award of grants and contracts are followed. We must put behind us the controversy and conflict of the past and work together to create a positive climate for research in education that will provide stability of directions and procedures, recognizing that the potential for educational improvement will be severely limited if we do not invest in the future through educational research.

Building a Research Structure

Production of good and useful educational research requires a structure that has not yet been carefully and systematically built. Such a structure must include a strong training system, an adequate system of research funding, and a constructive link of researchers with practitioners who know educational problems first time. The needed training system must include the capability for excellent training as well as the capability to attract outstanding students as trainees. I see this as a period in which the nation's research universities are recognizing anew their role in this training system and are reinvesting in capable faculty with outstanding research training skills. A federal role in support for training in this critical area could, at this time, be especially valuable. We cannot assume good educational research will come automatically. In fact, it will start with the training of good researchers.

The structure for research funding must have a built-in diversity to encourage creativity and new approaches. For example, the present concentration on of funding is on regional labs and centers with a trivially small portion for field-initiated research. The labs are primarily involved with service activities, not research, leaving the centers as the primary mechanism for research funding. The funding of research through centers has distinct advantages as well as some disadvantages. On the positive side, it allows several major, established problem areas to be identified and to consolidate and focus resources on those areas. However, even for these problem areas there needs to be diverse funding options in addition to centers. It is important that multiple approaches be pursued and capable researchers not on the staff of existing Centers be funded. The centers were never conceived as the **sole** approach to a problem area and yet, with funding trends of recent years, they have come to be precisely that. As noted earlier, we need program/project funding in forms other than centers. In addition, we must have funding to help us explore the developing areas in advance of their becoming such substantial problems that a center is warranted. We probably should consider as well other approaches to major problem areas than the present lab, center, field-initiated, or program modes already discussed. Perhaps a very small number of major, overriding problems might be targeted (e.g., urban schools or children at risk for school failure) for attention that might include all four modes plus others as well.

Finally, the needed structure requires close ties between practicing educators and researchers. Many positive efforts are being made in this direction and they should be encouraged. Both the practitioners (teachers, administrators, etc.) and the researchers have important and mutually supportive roles to play in setting a positive climate for education, in setting agendas and directions, and in working collaboratively toward improved approaches. We cannot afford a research community ignorant of practical problems any more than we can afford a practitioner community ignorant of the findings of research.

Assisting Staff Development

With decreasing resources, one trend of considerable concern is the insufficient funding for OERI staff to pursue what, in other federal agencies, are normal and appropriate staff activities. If staff do not have opportunities to make site visits, to attend substantive conferences, and to grow and stay up-to-date on their jobs, the whole research enterprise is harmed. We need the best possible staff in OERI. To recruit and keep good staff, opportunities for growth and development must be made available. Attention to the use of resources internal to the Department is another role this Committee can play.

Concluding Remarks

The theme of AERA's 1989 Annual Meeting is "The Interdependence of Research and Practice." It is an important theme suggesting that good research and good practice go hand in hand. We need more good research. I can assure you that AERA stands ready to work with the Select Subcommittee in fulfilling its mandate to provide more and better research to help this Nation achieve the potential of its educational system.

Mr. **Owens**. Thank you.

Ms. Judi Conrad.

STATEMENT OF JUDI CONRAD, ASSISTANT DIRECTOR, ERIC CLEARINGHOUSE ON HANDICAPPED AND GIFTED CHILDREN, AND CHAIR, COUNCIL OF ERIC DIRECTORS [COED]

Ms. **Conrad**. Thank you, Mr. Chairman. I am Judi Conrad. I am the associate director for the ERIC Clearinghouse on Handicapped and Gifted Children. I am chair of the Council of ERIC Directors. ERIC is very pleased to be here today.

Mr. **Owens**. Would you be a little more comfortable if the mike was pulled a little closer?

Ms. **Conrad**. You can't hear?

Mr. **Owens**. You seemed to be straining.

Ms. **Conrad**. Oh. ERIC is very pleased to have the opportunity to participate in these hearings today. ERIC is committed to the premise that educational research and development is essential to the future of the Nation. As the preeminent education information system in this country, ERIC both contributes to and depends upon R&D information.

We can attest to the fact that reductions in Federally funded R&D dramatically affect our ability to provide adequate information to the information user.

The following basic principles reflect the larger issues that should influence the future of the research and development and dissemination agencies in this Nation:

One, the security and economic stability of our country are tied to our ability to understand the problems of change both at home and within the international arena.

Two, the ability to understand and deal with change is largely dependent upon the quality of our educational system.

Three, the quality of our educational system is directly tied to rigorous and regular assessment of educational theory and practice.

Four, the fact of the impact of well-researched educational theory and practice is tied to the emphasis placed upon the dissemination of this information.

And finally, the ability to effectively translate and disseminate educational information is dependent upon the degree to which we help our legislators understand the awesome responsibility of education and educational accountability as revealed by the research and development effort.

Educational research and development efforts must be conceived within the context of the interdependent nature of the research, development, and dissemination triad because the impact of R&D knowledge is dependent upon how effectively that knowledge is delivered to educational practitioners and policymakers.

Current funding mechanisms tend to fragment rather than coordinate RD&D activities. Today, we have a huge conglomeration of educational entities concerned with the research, development, and dissemination of educational information. In addition to the OERI-funded regional education laboratories, national research centers, national diffusion network, and ERIC, there are myriad other similar organizations. For example, there are clearinghouses which are not a part of the ERIC system, research centers which are not a part of the national research center system, and development and demonstration efforts which belong neither to the regional laboratory system nor to the NDN.

Research, development, and dissemination are going on in State education agencies, in intermediary education units, and in local education agencies throughout the country. We have thousands of independent researchers operating out of our institutions of higher ed, and there are hundreds of professional organizations that also produce and disseminate information.

Additionally, educational R&D is going on in the private sector, within the military complex, and even within classrooms throughout the country. Fragmentation of the R&D effort seriously undermines usage of educational information.

An example of the magnitude of the fragmentation problem can be illustrated by recent experience of the ERIC Clearinghouse on Handicapped and Gifted Children. In an effort to respond to OERI's mandate to establish ERIC partners and develop collaborative relationships, the Clearinghouse established a task force as a subset of its national advisory board, charged with working towards development of a national information system, which is also an OERI mandate.

This task force is comprised of four other Federally funded projects within the special education arena, which for the most part also call themselves clearinghouses. While all are Federally funded, none are funded by OERI. Though they are all familiar with the generic difficulty of gathering, repackaging, and disseminating special education information, to some extent all of these four projects currently produce similar, if not duplicative, information products.

One of the objectives of the task force then is to identify those products which are duplicative, determine which products best serve our users' needs, and then use those products rather than any other for dissemination.

We know, for example, that three of these projects produce factsheets on various disabilities that are quite similar to the ERIC Digest. If the ERIC Clearinghouse finds a perfectly acceptable piece on dyslexia, for example, has already been produced, chances are that piece will probably be adapted to the ERIC Digest format and the Clearinghouse will put its resources into another area.

A second objective of this task force is to identify information gaps and to determine collectively which of the projects should or could best address that gap. Additionally, the task force plans to put together information packages that include information on all five projects with sample products included from each.

The ERIC system, the ERIC experience, is really a microcosm of the larger R&D problem. The 16 clearinghouse and supporting units which comprise the ERIC system are extremely diverse. ERIC contends with problems of turfdom, overlap, and communication comparable to those that plague the players in the larger R&D complex.

Because the system has a common goal, is computer-based, and contributes to the development of a common product, it has had to devise a set of rules and regulations to which all components could subscribe. While each of the 16 clearinghouses provide services for very different educational constituencies, the process by which that information is delivered is highly regulated, since all ERIC data must conform to the demands of computer technology.

However, it is the commonality of clearinghouse functions which best bonds these potentially very independent clearinghouses. Each clearinghouse performs three major functions which are inextricably interrelated and which feed upon and support one another. These functions are: data base building, user services, and information analysis. The data base building function is dependent upon the acquisition of document and journal literature. The information analysis function is dependent upon the degree to which the data base is adequately supplied. And the user services function is dependent upon the quality of the information analysis function and the degree to which our synthesis products entice use of the data base and stimulate development of new information.

Each clearinghouse within the ERIC system understands and subscribes to the importance of interdependence, both within clearinghouse functions and the ERIC system as a whole. Just as the ERIC functions are interrelated, so are those of RD&D. Research feeds development and both feed dissemination. The relationship is naturally interdependent.

Virtually all the components for a national education information system are already in place. Collectively, the national research centers, the regional laboratories, and ERIC constitute the framework for a national RD&D system. If properly orchestrated, all the other educational research, development, and dissemination efforts going on in Federal, State, local, and private sectors could feed into this triad, which would then constitute a national information system.

What is missing is the policy to guide development of such a system. We need a national research information policy that defines respective roles, coordinates activities, and encourages cooperative ventures. But such a policy would have to be supported. Implementation would have to be effected through a coordinating entity charged with responsibility for tracking the national RD&D efforts, analyzing the impacts of those efforts, communicating with all system participants, and otherwise promoting educational research, development, and dissemination as vital to the national welfare.

I have a list of specific recommendations which is included in the testimony. I heard the bell. If you do not wish me to go through these, I will be happy to not.

[The prepared statement of Judi Conrad follows:]

Testimony Prepared for the
Subcommittee on Select Education
House of Representatives

Oversight Hearing on
the Office of Educational Research and Improvement
April 21, 1988

Submitted by

Judi Conrad, Associate Director
ERIC Clearinghouse on Handicapped and Gifted Children
Chair, Council of ERIC Directors

EXECUTIVE SUMMARY

Educational research and development efforts must be conceived within the context of the interdependent nature of the research, development and dissemination triad, because the impact of R&D knowledge is dependent upon how effectively that knowledge is delivered to educational practitioners and policymakers.

Current funding mechanisms tend to fragment rather than coordinate RD&D activities. Today we have a huge conglomeration of educational entities concerned with the research, development, and dissemination of educational information. In addition to the OERI-funded regional education laboratories, national research centers, National Diffusion Network (NDN), and ERIC, there are myriad other similar organizations; for example, there are clearinghouses which are not a part of the ERIC system, research centers which are not part of the national research center system, and development and demonstration efforts which belong neither to the regional laboratory system nor to the NDN. Research, development, and dissemination are going on in state education agenies (SEAs), in intermediary education units (IEUs), and in local education agencies (LEAs) throughout the country. We have thousands of independent researchers operating out of our institutions of higher education, and there are hundreds of professional education associations that also produce and disseminate information. Additionally, educational R&D is going on in the private sector, within the military complex, and even within classrooms throughout the country.

Fragmentation of the RD&D efforts seriously undermines usage of educational information. An example of the magnitude of the fragmentation problem can be illustrated by recent experience of the ERIC Clearinghouse on Handicapped and Gifted Children. In an effort to respond to OERI's mandate to establish "ERIC Partners" and develop collaborative relationships, the clearinghouse established a task force (as a subset of its National Advisory Board) charged with working toward development of "a national information system." This task force is comprised of four other federally funded projects within the special education arena (which for the most part also call themselves "clearinghouses"). While all are federally funded, none are funded by OERI, though they are all familiar with the generic difficulty of gathering, repackaging, and disseminating special education information. To some extent, all of these four projects currently produce similar if not duplicative information products. One of the objectives of the task force, then, is to identify those products which are duplicative, determine which products best serve our users needs and then use those products rather than any others for dissemination. We know, for example that three of these projects produce fact sheets on various disabilities that are similar to ERIC Digests. If the ERIC clearinghouse finds that a perfectly acceptable piece on dyslexia has already been produced, chances are that piece will probably be adapted to the ERIC Digest format and the clearinghouse will put its resources into another area. A second objective of this task force is to identify information gaps and to determine collectively which of the projects should/could best address that gap. Additionally, the task force plans to put together information packages that include information on all five projects, with sample products from each.

The ERIC experience is a microcosm of the larger RD&D problem. The sixteen clearinghouses and supporting units which comprise the ERIC system are extremely diverse. ERIC contends with problems of turfdom, overlap, and communication comparable to those that plague the players in the larger RD&D complex. Because the system has a common goal, is computer based, and contributes to development of a common product, it has had to devise a set of rules and regulations to which all components could subscribe. While each of the 16 clearinghouses provides services for very different educational constituencies, the process by which that information is delivered is highly regulated since all ERIC data must conform to the demands of computer technology. However, it is the commonality of clearinghouse functions which best bonds these potentially very independent clearinghouses. Each clearinghouse performs three major functions which are inextricably interrelated and which feed upon and support one another. These functions are database building, user services, and information analysis. The database building function is dependent upon the acquisition of document and journal literature; the information analysis function is dependent upon the degree to which the database is adequately supplied; and the user services function is dependent upon the quality of the information analysis function and the degree to which our synthesis products entice use of the database and stimulate development of new information. Each clearinghouse within the ERIC system understands and subscribes to the importance of interdependence both within clearinghouse functions and the ERIC system as a whole.

Just as the ERIC functions are interrelated so are those of RD&D. Research feeds development and both feed dissemination. The relationship is naturally interdependent. Virtually all the components for a national education information system are already in place. Collectively, the national research centers, the regional laboratories and ERIC constitute the framework for a national RD&D system. If properly orchestrated, all the other educational research, development, and dissemination efforts going on in the Federal, state, local, and private sectors could feed into this triad which would then constitute a national information system.

What is missing is the policy to guide development of such a system. We need a national education information policy that defines respective roles, coordinates activities, and encourages cooperative ventures.

But such a policy would have to be supported. Implementation would have to be effected through a coordinating entity charged with responsibility for tracking the national RD&D efforts, analyzing the impact of those efforts, communicating with all system participants, and otherwise promoting educational research, development, and dissemination as vital to the nationa welfare.

Specifically, the following is recommended:

1. The Department of Education needs to establish a National Education Information Dissemination Policy.

2. That policy should be directed at development of a National Education Information Dissemination System.

3. That system should capitalize upon the naturally interdependent relationship of the research, development, and dissemination triad.

4. The RD&D triad should be supported by a quasi-independent agency charged with the following responsibilities:

   Coordination.

   - development of an RD&D project-tracking database
   - development of a product-and-service tracking database
   - development of research-results-tracking database
   - development of a needs-sensing mechanism designed to gather data from information queries
   - development of a mechanism whereby the schedules of all RD&D projects and personnel are available at a central location
   - development of a mechanism for equitably placing major players in the RD&D arena on each other's advisory boards
   - development of a national RD&D Advisory Board to serve the National Research, Development, and Dissemination System

OERI Lab/Center Oversight Hearing

Judi Conrad, Associate Director,
ERIC Clearinghouse on Handicapped and Gifted Children,
Chair, Council of ERIC Directors
April 21, 1988

The ERIC system considers it both an honor and a considerable responsibility to participate in the Congressionally sponsored oversight hearings on the regional laboratories and the national research centers funded by the Department of Education through the Office of Educational Research and Improvement.

The following comments and recommendations are presented on behalf of the ERIC system. Because ERIC can offer the institutional history of some 21 years of experience as the conduit through which the results of educational R&D passes, I think it is appropriate and important that ERIC is represented here. However, I will be addressing the triad of research, development, and dissemination, since I think that R&D efforts are rendered impotent without adequate dissemination.

ERIC is committed to the premise that educational research and development is essential to the future of the nation. As the preeminent education information system in this country, ERIC both contributes to and depends upon R&D information. We can attest to the fact that reductions in federally funded R&D dramatically affect our ability to provide adequate information to the information user.

The following basic principles reflect the larger issues that should influence the future of the research, development, and dissemination agencies in this country:

- the security and economic stability of our country are tied to our ability to understand the problems of change both at home and within the international arena;
- the ability to understand and deal with change is largely dependent upon the quality of our educational system;
- the quality of our educational system is directly tied to rigorous and regular assessment of educational theory and practice;
- the impact of well researched educational theory and practice is tied to the emphasis placed upon the dissemination of this information; and

- the ability to effectively translate and disseminate educational information is dependent upon the degree to which we help our legislators understand the awesome responsibility of education and educational accountability as revealed by the research and development effort.

It is within the context of these principles that we would like to suggest that the problem of our educational research, development, and dissemination agencies stems from a fragmented approach to the educational problems in America. This fragmentation promotes lack of communication among the major players which, in turn, defeats cooperation and collaboration and ultimately the efficient utilization of limited resources. It is our intent to suggest by way of examples drawn from the ERIC experience how we might begin to develop a model that would bring us out of the mode of individual survival and into a posture of strength and influence. We are convinced that the reason the agencies of research, development, and dissemination continue to operate in a survival mode is because the Federal Government has not coordinated our efforts. We have not communicated regularly with the Department of Education nor with one another and we have, therefore, failed to engage in cooperative efforts. Thus, the three issues we will address are:

(1) Coordination

(2) Communication

(3) Cooperation

THE COORDINATION PROBLEM Many factors militate against coordination of the research, development, and dissemination enterprise, but a principal factor is the fragmented way in which our policymakers create the funding mechanisms that support educational RD&D. That is to say, many projects are created and funded without taking into consideration those efforts that already exist, without building upon well-established agencies and organizations such as the labs, centers, and ERIC.

Today we have a huge conglomeration of educational entities concerned with the research, development, and dissemination of educational information. Besides the OERI-funded labs, centers, National Diffusion Network (NDN), and ERIC, there are myriad other similar organizations; for example, there are clearinghouses which are not a part of the ERIC system, research centers which are not part of the national research center system, and development and demonstration efforts which belong neither to the regional laboratory system nor to the NDN. Research, development, and dissemination are going on in state education agenies (SEAs), at intermediary education units (IEUs), and within local education agencies (LEAs) throughout the country. We have thousands of independent researchers operating out of our institutions of higher education, and there are hundreds of professional education associations that also produce and disseminate information. Additionally, educational R&D is going on in the private sector, within the military complex, and even within classrooms throughout the country.

The problem is that all of these information providers and producers operate more or less independently. Consequently, information does not systematically flow from information producer through the information disseminator to the information user. Given the fragmentation of the R&D community, the ERIC system has had remarkable success in acquiring educational information, but we are, perhaps, more sensitive than most to the fact that there is a vast amount of educational information that continues to go uncaptured. ERIC is a relatively small program and is not adequately funded to reach all the information producers in this country, nor is it funded to reach the vast numbers of potential education information users. Better coordination at the federal level would greatly enhance our ability to capture and deliver relevant information.

Despite this fragmented state of affairs, the ERIC database manages to acquire enough information to make it the single most used education information resource in the country, and, perhaps,the world. The fact that ERIC is widely used suggests that the government ought to capitalize upon this resource and focus development and expansion on such proven entities.

Duplicative Products

An example of the magnitude of the fragmentation problem can be illustrated by recent experience of the ERIC Clearinghouse on Handicapped and Gifted Children. In an effort to respond to OERI's mandate to establish "ERIC Partners" and develop collaborative relationships, this clearinghouse established a task force (as a subset of its National Advisory Board) charged with working toward development of "a national information system." This task force is comprised of four other federally funded projects within the special education arena (which for the most part also call themselves "clearinghouses"). While all are federally funded, none are funded by OERI, though they are all familiar with the generic difficulty of gathering, repackaging, and disseminating special education information. To some extent, all of these four projects currently produce similar if not duplicative information products. One of the objectives of the task force, then, is to identify those products which are duplicative, determine which is best, and then use that product rather than any other for dissemination. We know, for example that three of these projects produce fact sheets on various disabilities that are similar to ERIC Digests. If a clearinghouse finds that a perfectly acceptable piece on dyslexia has already been produced, chances are that piece will probably be adapted to the ERIC Digest format and the clearinghouse will put its resources into another area. A second objective of this task force is to identify information gaps and to determine collectively which of the projects should/could best address that gap. Additionally, the task force plans to put together information packages that include information on all five projects, with sample products from each.

While OERI is to be commended for promoting the "ERIC Partners" concept, the point is, there are all these "clearinghouses" working in the field of special education and there is no coordinating structure at the federal level which really facilitates systematic interaction. Moreover, the roles of these organizations inevitably overlap which is confusing both to the agencies themselves and to the information user.

Costs

Finally, it should be noted that this kind of field based coordination is costly. It takes considerable time and effort to interact at the operational level, which is precisely where that interaction must take place if it is to be successful, and ERIC does not believe it has been adequately funded to invest the kind of time this effort demands. Moreover, we believe that the increased emphasis on outreach will inevitably generate more and more information users which we will serve less and less adequately if the funding situation does not improve. In the words of one of our directors, "We have been set up for failure."

Fragmentation

The degree to which our RD&D efforts are fragmented is related to the degree to which the bureaucracy is fragmented. That is, the Department of Education funds projects and even systems without adequate regard to the way in which they could or should interact. As a result, we have a regional laboratory system controlled by various mandates that have not been successfully coordinated with other government-funded systems. The lack of coordination promotes competition, because no one really understands how one system or one project can or should support another. Further compounding the problem is the fact that the respective roles of the major players in this arena are not carefully delineated so there is a great deal of functional overlap. While there has been some attempt at role delineation by specifying the population to be served (as in regional laboratories and national research centers), the functions of our various information producing and disseminating mechanisms are blurred at best. A lab, for example, both produces and disseminates information and often extends its purview beyond the region it ostensibly serves, while an ERIC clearinghouse located on a university campus may also provide any number of regional services (e.g., local workshops, computer search services, etc.) and may draw heavily upon regional resources.

Focal Point

The Federal Government can and should better orchestrate the entire research, development, and dissemination system. Because the Department of Education is the principal funding agency for the U.S. educational R&D efforts, it is incumbent upon the Department to steamline the process by logically structuring both its own offices and the projects it supports. Dissemination should be that focal point for creating such a structure, since the dissemination function is the natural point of convergence for the information producer, developer, and user. At a minimum, the Department could facilitate a dissemination forum wherein we collectively address our respective roles in the dissemination function. If, however, these hearings were to result in a concerted effort to clarify the respective roles of the research, development, and dissemination agencies and to allocate funds accordingly, we would have taken a giant step forward on behalf of education.

THE COMMUNICATION PROBLEM

Lack of coordination of the RD&D components results in a lack of communication. The communication problems with which we are faced are multifaceted and pervasive.

It is ironic that we find ourselves living in an era of communication technology increasingly sophisticated at the same time that our communication problems just seem to multiply. But, because we each operate out of our own specialized areas, we are necessarily connected to very specialized electronic networks, and there is no standard electronic communication vehicle to which all of the RD&D community subscribes. At the ERIC Clearinghouse on Handicapped and Gifted Children, for example, we subscribe to SpecialNet. We do not subscribe to the Source/Edline, nor do we subscribe to any other electronic network.

One aspect of the communication problem stems from wholesale acceptance of the superiority of the hard sciences and their adherence to the concept of specialization. The specialization of education has led to rampant compartmentalization, and compartmentalization has fostered myriad special interests groups which often end up working against each other "on behalf of education."

Consequently, we tend to talk about the "foreign language community" as if it existed independent of the "reading community" and the "research community" as if it existed independent of the "dissemination community." Consequently, researchers do not, by and large, naturally communicate with disseminators and vice versa.

The educational bureacracy is plagued with the same phenomenon insofar as project officers communicate more with their projects than they do with each other, and offices within the Department of Education tend to operate in isolation from one another. The fact that most ERIC Clearinghouses have not been called upon by other offices within the Department of Education for progammatic support suggests that the Department is unaware of the resources ERIC could provide. The Office of Special Education Projects is exemplary in its use of an ERIC clearinghouse to abstract and index funded research proposals and create and disseminate research syntheses. Surely there must be other opportunities for cooperation between OERI clearinghouses and other Department projects (e.g., bilingual education, vocational education, etc.).

We all spend a fair amount of energy categorizing ourselves and others into discrete identities from which we can generate statistics that can be used to capture dollars for our programs. But in our fervor to garner support for one target, we inevitably end up robbing another, and the end result is that education loses.

The ERIC example that comes to mind is creation of "Access ERIC," a new coordinating and marketing contract that is scheduled to come into existence later this year. While the ERIC system wants and needs such a component, it is coming at the same point in time when clearinghouse budgets are so strapped that many clearinghouses are having to cut back long established user services.

The point is, many factors impede the communication process, but there are equally compelling reasons for overcoming some of these impediments. The most obvious is the responsibility we have to provide the country with the best educational information we have. This simply cannot be accomplished when the major information producing, developing, and disseminating agencies are not systematically communicating with one another.

A second and, perhaps, even more compelling reason is that we will inevitably be better informed, and the better informed we are, the more effective we will be at communicating the educational needs of the country to the policy making bodies which determine the breadth and depth of RD&D support. Put another way, the more we understand about the intricacies of the RD&D enterprise, the better able we will be to help our legislators understand the need to think about education from a more wholistic perspective. Otherwise, we will continue to operate within a survival mode because we have not effectively marketed our respective and collective strengths to the policymakers. The old adage "United we stand, divided we fall" obtains.

Finally, effective communication among the RD&D players in the field should enhance the ability of the Department of Education to establish research-based priorities and make more responsible funding decisions. That is to say, if we can collectively determine our respective strengths and weaknesses and come to some minimal agreement as to who should be doing what, we all stand to gain, because each component could focus on what it does best.

One of the problems we have encountered in the ERIC system is that the information we can provide is nothing more nor less than what has been created. Sometimes there is not a one-for-one match between the information requested and the information produced. For example, we frequently find that the information sought by our clients is just not available or if it is, we do not know about it.

Collectively, we probably already have an excellent needs-sensing mechanism, but we do not systematically share information. The Clearinghouse on Handicapped and Gifted Children, for example, keeps elaborate statistics on the information requests which address one or more of some 20 disabilities.

The point is, the research, development, and dissemination agencies in this country can and should inform the policymakers, and they can best inform those policymakers when they, themselves, share information and when they collectively promote the information they have in hand. The more our policymakers understand about the intricacies of the education enterprise, the more inclined they will be to legislate the dollars needed to support the research, development, and dissemination triad. Therefore, it is in our vested interest to communicate among ourselves.

COOPERATION

Cooperation is the end result of coordination and communication. Cooperation implies collaborative and mutually beneficial activities. But, cooperation rarely manifests itself without some kind of structural impetus.

The degree to which individuals and organizations can cooperate is probably measured by the degree to which each entity derives equal benefits. In the ERIC system, we know that if any one clearinghouse fails to abide by the rules which guide the selection of subject index terms, the entire system suffers; index terms determine access and retrieval; access influences usage, and usage influences future information acquisitions, which, in turn, feed the database. Consequently, we all subscribe to the same basic indexing rules. It is that simple. But, ERIC is guided by systemwide rules and regulations which "help" its many components to cooperate with one another.

Interdependence

The definition of a system is "a group of units so combined as to form a whole and work in unison." Such a definition presupposes a common goal, and for ERIC that goal is information acquisition and access. ERIC is in many ways a microcosm of the larger RD&D problem. The sixteen clearinghouses and supporting units which comprise the ERIC system are extremely diverse. ERIC is as plagued with turfdom, overlap, and communication problems as any of the players in the larger RD&D complex. Because the system has a common goal, is computer based, and contributes to development of a common product, it has had to devise a set of rules and regulations to which all components could subscribe. While each of the 16 clearinghouses provides services for very different educational constituencies, the process by which that information is delivered is highly regulated since all ERIC data must conform to the demands of computer technology. However, it is the commonality of clearinghouse functions which best bonds these potentially very independent clearinghouses. Each clearinghouse performs three major functions which are inextricably interrelated and which feed upon and support one another. These functions are database building, user services, and information analysis. The database building function is dependent upon the acquisition of document and journal literature; the information analysis function is dependent upon the degree to which the database is adequately supplied; and the user services function is dependent upon the quality of the information analysis function and the degree to which our synthesis products entice use of the database and stimulate development of new information. Each clearinghouse within the ERIC system understands and subscribes to the importance of interdependence both within clearinghouse functions and the ERIC system as a whole.

Cooperation within the ERIC system is highly structured, but it works. By way of extension, then, we would like to suggest that the agencies of RD&D consider development of a structure that would facilitate comparable interdependence, comparable coordination, communication, and cooperation, because we do not believe that it will happen without benefit of a structured framework.

If we think of the educational information enterprise as comprised of information producers, information developers, and information disseminators which exist across a wide variety of organizations, groups, and individuals functioning within the private, federal, state, or local sectors, and which converge in the common goal of serving the information user, the interdependence is obvious. The information or knowledge producer is inextricably tied to information gathered about the needs of information users, and the information developer is largely dependent upon feedback from the information user. The information disseminator is absolutely dependent upon the information producer.

Structure

To move from the conceptual framework of interdependence to an operational reality requires a structure that will facilitate coordination, communication, and ultimately cooperation. And, cooperation cannot take place in any meaningful way unless and until there is understanding at the operational level of what it is that any given organization or group is attempting to do. In ERIC we make that happen by creating a directory which clearly delineates the responsibilities of the staff of the entire system, so that if a cataloger, for example, has a problem, there are 15 other catalogers with whom he/she may consult. We also have a long established history of providing annual technical and directors meetings wherein systemwide problems and concerns are discussed in open forum. Additionally, we have a technical steering committee and an elaborately structured vocabulary review process.

While such an elaborate structure is probably not necessary for the RD&D components, some structure is essential. At a recent ERIC meeting, Sharon Horn brought together representatives from the OERI divisions which monitor the work of the labs, the centers, and NDN and announced that these representatives were forming a task force to address the issues of cooperation and collaboration. This is a step in the right direction. This is the beginning of a much needed structure; however, we believe that the bureaucracy cannot possibly provide such a structure by itself.

A number of issues which have plagued the ERIC system for years should help to illustrate the difficulties inherent in the bureaucracy.

ERIC's Coverage of Literature

ERIC would like to be able to say that it provides comprehensive coverage of the educational literature produced by this nation. But the fact is, there is a considerable amount of literature that escapes our acquisition efforts. The reasons for this are many, varied, and complex. There is, for example, the notion that if an organization wishes to sell a product, it should not go into ERIC, because availability of a product through ERIC would cut into organizational profit. We maintain that this is just not so. In fact, we think that availability through ERIC can and does enhance sales for the producer, but there has never been a study of this issue, so we have no evidence to support our supposition. We believe this is so, because we know that reproduction of paper copy from microfiche is often more expensive and less appealing than purchase of the product from the originating organization. Secondly, we know that because ERIC clearinghouses as a matter of course, regularly monitor what products are being produced and regularly alert their respective constituencies to quality materials, the ERIC system can and does promote quality publications.

Acquisition of Federal Documents

The ERIC system is particularly concerned about its inability to acquire federally funded documents. We know that we are not acquiring all the lab and center publications. We become particularly concerned when a lab or a center terminates its contract, and years after the fact, some conscientious individual calls up and says, we have 50 titles that are out of print; we have no funds to print; and there is still a demand for these products or there should be access to these products for historical purposes. While we try to accommodate the needs as they arise, we believe the better procedure is to get the documents into ERIC at the outset, and we believe that putting them into ERIC will only increase the demand.

It should be noted that the Central ERIC staff is attempting to rectify this situation by allocating time and personnel to support a new OERI policy which would mandate that project officers on lab, center, and other OERI research and practice projects systematically provide the ERIC system with documents produced by the projects they monitor. However, we are concerned that OERI has not adequately assessed the person hours involved in making this happen, since NIE used to allocate one full-time person solely for this job.

Revenue Generation

Finally, the ERIC system would like to recoup some of the monies which the private sector makes on our products. Because we know that we are no longer able to provide the services we once took such pride in, we are casting about for ways to supplement the funding we have. We have talked about recouping money for years, and NIE and then OERI have made attempts to find a mechanism whereby we could attach a royalty to the database, but we have been told again and again that it would take an act of Congress to make this happen, and it does not appear as if OERI can initiate such an action. We have talked about adding commerical literature to the listings in the ERIC database thereby making ERIC a one-stop shop. And we have talked about the possibility of charging the publishers a small fee for inclusion in the ERIC database, but this too would probably take an act of Congress.

Yet, we know of at least one information vendor who is willing to consider payment of a royalty fee on the database and who has indicated comparable interest in the EDO (ERIC Digests Online) file.

Coordinating Body

The educational enterprise needs some separate but integrated entity that is not encumbered by the restrictions placed upon the Department of Education and its projects. Education needs an agency which can facilitate the coordination, communication, and cooperation necessary to put forth a united education front. And, such an agency needs the freedom to generate the funds necessary to identify and address the nation's educational research, development, and dissemination problems.

The "quango" concept comes closest, perhaps, to what we have in mind. According to the New York Times (August 24, 1987), a quango is what the British call a "quasi-autonomous nongovernmental organ, a private agency that works closely with government on issues like social policy." The example cited is the Manpower Demonstration Research Corporation, "a remarkable quango that created the data base that convinced Republicans and Democrats that welfare recipients are willing and capable of working."

Suffice it to say that ERIC knows from experience that it takes a carefully crafted structure to promote and sustain cooperation; that degree of cooperation is directly related to equitable benefits; and that real cooperation can only take place at the operational level.

RECOMMENDATIONS

While these remarks have been general and conceptual, the recommendations that follow are both specific and concrete.

1. The Department of Education needs to establish a National Education Information Dissemination Policy.
2. That policy should be directed at development of a National Education Information Dissemination System.
3. That system should capitalize upon the naturally interdependent relationship of the research, development, and dissemination triad.
4. The RD&D triad should be supported by a quasi-independent agency charged with the following responsibilities:

   Coordination.

   - development of an RD&D project-tracking database
   - development of a product-and-service tracking database

- development of research-results-tracking database
- development of a needs-sensing mechanism designed to gather data from information queries
- development of a mechanism whereby the schedules of all RD&D projects and personnel are available at a central location
- development of a mechanism for equitably placing major players in the RD&D arena on each other's advisory boards
- development of a national RD&D Advisory Board to serve the National Research, Development, and Dissemination System

Communication.

- development of an information dissemination mechanism to communicate information derived from all tracking mechanisms
- selection of a standardized electronic network to be used by all RD&D components
- development of a publicity, public relations, and marketing component to serve all RD&D educational entities, with emphasis on collective contributions
- development of national forums whereby major players are afforded opportunity to interact on a regular basis
- development of a national RD&D newsletter to be disseminated both via print and online mediums
- development of a national RD&D referral system whereby researchers, developers, and disseminators can be referred to appropriate information sources development of a technology task force to promote state-of-the-art information delivery systems

Cooperation.

- development of a training component designed to cross-train information delivery specialists
- development of a mechanism whereby the RD&D system delivers a state of the art report to Congress on an annual basis
- development of a research, development, and dissemination foundation which can both recoup and disperse funds to the RD&D community.

Mr. **Owens**. Thank you very much, Ms. Conrad.

I want to thank all of the panelists and say at the outset of the question-and-answer period that there are obviously two levels of concern, two levels of action necessary here. One deals with the fact that it's like we were looking at the forest, we hope we're looking at the forest in the total, comprehensive nature of the forest, but there are a lot of rotten trees in the forest, and I would first just like to get rid of that concern.

We would like to address some of these issues. We are aware of them: the payment of peer reviewers, the failure to provide travel money and forcing the staff to take their own annual leave to go to conferences. Those kinds of things are indicators, however, of the second-class status of research and development and educational activities in general.

It's difficult to do business with the Federal Government. All entities find difficulties, but I assure you the difficulty is not always as great as some of the things you have cited.

You know, the Newport News shipyard, I assure you they don't have any problem getting back their interest. They factor all that in, and it's understood that the money they borrow and pay interest on is going to be taken care of. And a number of other difficulties, when you're dealing with other Departments—Commerce and Energy and Transportation—I have not noted the severity of difficulties that are encountered in the programs related to education. So, that is part of the second-class status, probably part of the low-priority status that is assigned by OMB and it's part of what we have to contend with.

But we are aware of these kinds of problems, and without going into them in great detail, I want you to know that we will address them. As I said before, we intend to issue a report on this hearing calling for action no later than June 15, and we intend to follow up on that by seeking the support and assistance of the full committee by doing everything possible to implement the recommendations that we make step by step. So that we are concerned about the total situation. There are certain urgent problems that have to be addressed, and we would like to begin to address those problems.

If you have any comment on this kind of problem, you are free to make those comments, of course. But let's open with the bigger issue, the bigger concern of the forest.

Dr. Ambach, your statement, written statement, your oral statement, was quite exemplary, and I thank you for the statement. You made a statement about a goal of a 100 percent graduation rate might be the tide that lifts all boats, that if we set such a goal as a unifying factor for a national research and development effort, it would be the cement that would be the catalyst, that it would do what needs to be done in terms of revamping research and development in the area of education.

I want to get a response from the rest of you. Do you think that such a goal would lift all boats, that cognitive research into higher-order thinking and cognitive development would be lifted at the same time, and research on exceptional children, would that be lifted, testing research? Would we get a better dissemination operation and process? Any comments?

Yes, Mr. Cross.

Mr. **Cross**. Mr. Chairman, my concern would be, although I think there is a great deal of value to having that piece of glue to hold things together, is that much would not be attended to if that were a single focus.

Now, in addition, I think there could be some element of packaging things that might be marginal to that goal to make it appear as though it was part of that goal in the interest of trying to force things or shape things around policy.

I think the idea of an agenda that has some overall coherence is a good one. I would only be concerned with having a single issue that would drive everything, because education is not driven by single issues. There are a lot of different issues out there.

I think one of the problems with the community has been identifying a few issues to concentrate on, and I would suggest that as an alternative: select a few, rather than a single one.

Mr. **Owens**. Let's leave out higher education for the moment, adult education—well, not adults; we will not leave that out. Leave out higher education for the moment. Can you indicate a single issue that would not be driven by this goal? Certainly, early childhood education would be a high priority if you wanted to guarantee that you get a 100 percent graduation rate. From what we know about early childhood education, putting the first effort there would certainly be a necessity if you're going to try to guarantee a 100 percent. Educational technology research? What would not be driven by such a goal?

Yes, Dr. Fuhrman.

Ms. **Fuhrman**. Mr. Chairman, I think you mentioned some of them earlier, the questions revolving around higher-order thinking and intensification of the entire curriculum to produce better achievement for all might not necessarily be addressed by that goal.

Mr. **Owens**. Would they not?

Ms. **Fuhrman**. Might not.

Mr. **Owens**. In order to graduate, these youngsters are going to have to pass a curriculum that includes science and math. We're raising those standards.

Ms. **Fuhrman**. We are raising those standards.

Mr. **Owens**. Those requirements.

Ms. **Fuhrman**. We could have people going through three years in math and science and not necessarily address what they're learning in math and science, particularly with our current level of assessment and testing. So, we could have a 100 percent graduation rate with people passing basic skills test perhaps to graduate and not necessarily raise the level of the work force to address the problems of the 21st century.

I think it's a very useful goal, but again not a single goal.

Mr. **Owens**. We could look at the definition of graduation again, too.

Ms. **Fuhrman**. That's right.

Mr. **Owens**. Dr. Cole.

Ms. **Cole**. Well, I think the notion of a coherent goal is a very useful one, and I think that if done properly most things could be tied in with, take kindergarten or below through graduation, to a goal like that.

Let me tell you a related concern, though, that I have. I think in this country we look to simplistic solutions very often, and we look to our educational system to solve our broad societal problems, and I get nervous when we turn that same thing to now look to education research to now solve all the problems of our educational system. Our educational system is a very extremely diverse system, and we gain a lot from that, and among the things we suffer from it is some of the confusion and overlap and lack of systemization in attacking our educational problems in this country.

We could have a much more unified system if we chose in this country, and we have not chosen. We would simplify many of the kinds of problems we have talked about for dissemination, a number of things, if we had a more central system. We would also lose some things.

But as we think about a goal and something driving our educational research activities, I would hope we would keep in mind very carefully what the reasonable contribution of educational research is and how much of it is—we can spend a tremendous amount of time and money in this country in linking and getting anything that's known, in some sense known, to the point of having it implemented in every school in this country. And if we would take that implementation out of educational research pool of resources, the implementation is going to take all the funds and there's going to be none for the research base for the next wave of implementation to correct some of the mistakes that we made in this present one.

The role of research and what kind of funding base it should have and how it links to the implementation problems is a really huge one to keep in mind in this.

Mr. OWENS. Well, it's the problem of which comes first, the chicken or the egg. And you're assuming that researchers and the research and development process will never have a significant impact, that great an impact, on what happens in education in the Nation. That may be true, looking at what past——

Ms. COLE. No. No.

Mr. OWENS [continuing]. Experiences and looking at the present situation.

But are we locked into that? Is it not possible for research and development to have a far greater impact and be an overall guiding influence on how education develops in the Nation? For example, we can't have adequate research and development unless it is centralized, unless we do have it. So, it is the component in education which is going to be centralized, of necessity. So, it has a probability of having a greater impact in the other kinds of activities.

Ms. COLE. That's right. And I think we could trace historically the tremendous impact that educational research has had in the past in a number of areas. And I am not suggesting it can't have an impact, I am suggesting that we shouldn't assume that impact is a real direct, linear, that we learn it here and then we figure out how to get it all out over here. And what we're doing is putting it out in systems that are operating independently and with their own driving forces, and it's just a more complex process.

Mr. OWENS. What about the education of the disadvantaged, Dr. Ambach, would your goal of a 100 percent graduation rate solve that pressing problem, the problem which has greatly been ignored?

Mr. **Ambach**. That is precisely what the——

Mr. **Owens**. These reports show that urban education and inner-city education has been ignored and has been left out of what advances have been made as a result of educational reform, have not impacted in the inner cities where you have the largest number of disadvantaged youngsters.

Would your overall goal lift that boat, too, your tide?

Mr. **Ambach**. Mr. Chairman, that is precisely the boat to be lifted by that objective. Indeed, the difficulty in the past has been that there has been a kind of a sense that every child can learn and there has been a kind of a sense that all children should have the objective of graduation from high school. And yet, there has not been, in my judgment and in the judgment of our council—and the reason for having that policy statement—that we make very explicit that that is the objective and the objective for all children.

The policy statement, which I did not describe in any detail because of time this morning, provides explicitly and focused on the State level for the establishment of guarantees for children who are at risk of not graduating from high school, or the disadvantaged children, in order to try to assure that they are going to graduate from high school. So, that is precisely the target.

Mr. **Owens**. Let me reread the statement I read yesterday, quoting language still preserved under current law governing the Office of Educational Research and Improvement, which is in the original langauge when we founded the National Institute of Education:

> The Congress declares it to be the policy of the United States to provide every individual an equal opportunity to receive an education of high quality regardless of race, color, religion, sex, age, handicap, national origin, or social class. Although the American education system has pursued this objective, it has not obtained that objective. Inequalities of opportunity to receive high-quality education remain pronounced. To achieve the goal of quality education requires the continued pursuit of knowledge about education through research improvement activities, data collection, and information dissemination.

Why have we done such a bad job when this is a clear statement of purpose of the Federal Government? We have centers and labs, and whatever the shortcomings are, why has so little been done in this area? Why is the assistant secretary now proposing a center for the study of the education of the disadvantaged? Why have we not addressed these issues more in our literature?

You will find situations like the ones cited by Assistant Secretary Finn, where when he queried leading educational researchers to list what the priorities should be in research, all of the items related to the educationally disadvantaged were on the bottom. They got the lowest priorities.

Why at this late date do we have this kind of phenomenon in the research community? I mentioned in my opening statement yesterday the possibility of a problem of academic apathy and academic corruption and scholar tribalism.

Could you comment on this phenomenon? It is quite baffling to find that here, a major problem that also in the language of Congress and the intent of Congress was highlighted, and yet it was not sufficiently addressed.

Secretary Finn says that 25 percent of the activities of the labs and centers are dedicated to the educationally disadvantaged. I don't dispute that. But you know, the evidence in terms of highlighted results as far as Congress can see is not just not there.

Could you comment? I would like to have a comment from all of you on that.

Mr. **Hopkins**. Mr. Chairman, I would like to comment on that. You were given information yesterday, and at one point yesterday it was cited that perhaps five percent of the activity of the laboratories and centers was devoted to work with minorities and disadvantaged. I will tell you that that is not a correct statement. I will tell you that—I'm sorry?

Mr. **Owens**. What percent?

Mr. **Hopkins**. I will tell you that at my laboratory the vast majority of our effort is devoted towards at-risk children, and I would put the figure at my laboratory at 75 or 80 percent of our effort.

The reason for that is our funds are so slim that we only work on the highest-priority activities of the people with whom we partner, and their greatest concern is the advancement and benefit of at-risk children.

Since that is their concern and our concern, we have no difficulty whatsoever in finding willing partners to work in this area, whether you're talking about field studies, whether you're talking about development or dissemination, technical assistance or training, the focus of our work is predominantly on at-risk children.

Mr. **Owens**. Can you speak for the labs in general and give us a figure, an estimate?

Mr. **Hopkins**. I cannot speak for them generally, but I am aware, as was reported to you yesterday by Dr. Goldberg, that collaboratively we are joined in an effort to work and concentrate on at-risk children, and I know personally of large programs at every institution that are focused on at-risk children.

Mr. **Owens**. You think the general statement or thesis of the Carnegie Corporation report issued by Dr. Boyer recently, saying that urban schools have been bypassed and have not received sufficient attention, that that is in error?

Mr. **Hopkins**. No, I do not. I think that what we are seeing today and the needs that we have today and the reason that we're concentrating there is a product of that past attitude.

Mr. **Owens**. Yes, Dr. Cole.

Ms. **Cole**. The language you read referring to opportunity allows a rather passive interpretation, and one has to think—I think politically one of the things we have to think about with respect to these issues nationally is the "whose responsibility is it." The providing opportunity gives the notion of kind of laying something out that somebody has got to come and take the opportunity.

I think one of the interesting things about Mr. Ambach's proposal is it does place a different kind of responsibility on the whole educational system for the accomplishment of goals that we may have failed to adequately place in general.

But let me, in your more general question, I think I should raise an issue that I think is one that we go back and forth on, and that is the extent to which many of the things which are being studied in educational research have unique or special answers for disadvantaged students, at-risk students, or the extent to which things that are being learned in general are in fact very applicable and helpful for disadvantaged students, and it makes this kind of "what research is directed at whom" a difficult issue to deal with.

For example, I know things that we've learned in reading and higher-order thinking, just to mention two examples, not necessarily simple ones, are things that are very relevant to thinking about how to take at-risk children very early in the school system and produce the kind of strategies towards learning to read and learning to think that are very effective with disadvantaged populations.

It's one of those binds we get into as we—I mean, we argue on the hand that these children are not essentially different from other children in what they're capable of doing, and that's in fact what we find in our research, that when we can get the things we've learned and actually make them available to these children, that they do profit from them.

Mr. **Owens**. Do you think the problem is in applying the research, not in the research; is that it?

Ms. **Cole**. Oh, no. I think I am not going to let us off the hook as researchers that cleanly, because there are I think a lot of the contexts of applications that need study, that need considerable study. But at the same time I think a lot we know in general is information that we can use in particular.

Mr. **Owens**. The charge has been made that tribalism among scholars is a major problem and that they tend to focus on those subjects that they are most familiar with and their particular circle of academic colleagues and that's the way the research tends to go as a convenience in terms of personal connections and that that drives and motivates a lot of the priority-setting.

That kind of charge has been made, and black scholars have made the charge that they are locked out of research and development activities. Not a single historically black college has a contract with the Federal Government in this area.

So, we have a situation which must be answered.

Ms. **Cole**. That's right.

Mr. **Cross**. Mr. Chairman, if I may make one brief comment on this. I think one of the situations you're looking at is the reality of political influence. The political influence of the groups that support special education, vocational education, student aid, for example, is quite substantial. There is no corollary group that has that kind of influence or pressure upon both the Congress and the department in the area such as disadvantaged children and the problems that surround that. I think what you're looking at is a consequence, in part, of that.

Mr. **Owens**. So, if the Congressional Black Caucus were able to push through a requirement of a 10-percent set-aside for all future research and development funds, would that be a corrective action, or would it be viewed as unprofessional, corrupting, and pork-barrel setting, et cetera?

Dr. Fuhrman.

Ms. **Fuhrman**. I would reiterate what Dr. Cole said about the tension in research between believing that good practice is good practice for all, and in wondering whether there aren't special techniques, practices, instructional methodologies that are particularly effective with disadvantaged children.

I think what's missing, in particular, is the urgency of addressing the special issues of disadvantaged children even if good practice is good practice for all is in some sense focusing in on how that good practice can be applied in settings where there are lots of disadvantaged children and in the best manner is something that is not done because the urgency hasn't been there.

I also would remind the Chairman, as Dr. Kilgore said yesterday, a number of the centers have significant activities across their missions on students at risk. But it may not be as visible because it's not focused as the new center will be.

Mr. Owens. Ms. Conrad.

Ms. Conrad. I would have no comment to add.

Mr. Owens. Let me move to my next question and make a bridge here. Army basic research, how much of it appears in ERIC centers? How much of that material is available for us to disseminate? The Army makes use of or somehow trains disadvantaged youngsters, you know. They have become rather elitist now. We haven't had a grinding war for a long time.

But as you can see from the statistics and who died in the war in Vietnam, they had a large number of disadvantaged youngsters in the Army that they trained to do some rather complex tasks. The Navy, the Air Force, obviously, they have ways of educating that should be looked at. I think they use more audio-visual devices and there are a number of things they do which we have known for a long time but that are not applied to the public schools. We ought to take a hard look at that.

But certainly, we heard this morning that there is a tremendous amount of research being done by the Army relating to the training of people and the education of people, and it is available, it's not classified.

How much of it gets into the ERIC centers?

Ms. Conrad. Very little, if any.

Mr. Owens. Did you know about the fact that it's unclassified and available?

Ms. Conrad. Yes. I was aware that there was considerable information within the military complex. We do not have what we call an acquisitions arrangement whereby automatically that information flows to us. We are not funded to go out and drum up that kind of information at this point in time.

Mr. Owens. Your statement sets forth a brilliant justification for some kind of overall new structure which links the military, the other Government sectors, the private sector, the nonprofit sector. I would like to have from the group—and some of you did address that—do you want to have any final additional comment to make on what might be? Some people said we don't need that kind of structure or we need a diversity or plurality of quangos.

But is there any other person who wants to make a statement on the restructuring issue, whether that would help or hinder the long-term problem, the grooming of the forest, the perfection of a new kind of environment in which to operate?

Yes, Mr. Cross.

Mr. **Cross**. Mr. Chairman, to go back to your analogy of the forest and some of the conversation from the first panel, I think the idea of having lots of different varieties of trees out there, if you will, and a variety of practitioners and people who are engaged in research is very important.

I would associate myself with the remarks of Mr. Wallgren from the High/Scope Foundation that the idea of having competition there is very important and is, I think, one of the issues which you might look at.

Mr. **Owens**. Mr. Wallgren declined to compete. He didn't compete. He wouldn't become a part of the competition for centers or labs.

Mr. **Cross**. That's right. But he has clearly competed in some other things. He does receive some Federal aid. I don't know the details of what that is.

But I think one of the issues in education research may be that it's very hard to get new people into it and to get in the new faces and new ideas, and I would speculate that if you had a single small set of providers that had an ongoing set of relationships that locked out other competition, that the enterprise could suffer from that. And I think that competition is a value that I would certainly like to see the subcommittee preserve in what's done in this field.

Mr. **Owens**. Mr. Cross, I had a question I meant to ask you before about the disadvantaged. In your review of the labs, what percentage did you find of that activity which could be reasonably said to be related to the problem of educating the disadvantaged?

Mr. **Cross**. Mr. Chairman, I can't answer that because we did not do the individual site visits to the labs. There were site visit teams that went to each of those labs. I could go back and ask that information to be pulled out and to be supplied for the record to the extent that we have that information. But I can't answer that this afternoon.

Mr. **Owens**. Another question would be why wasn't that considered important enough to be given more emphasis?

Any other comments on the overall structure? Yes, Dr. Ambach.

Dr. **Ambach**. Mr. Chairman, as I said in my opening statement, the structure of what you want to do really needs to follow from the purpose of the mission, and if one takes as a major purpose over a period of years an objective such as I suggested or if I am testing that one finds another objective is a better one, then you craft what should be the structural arrangement from that.

In order to undertake that, it seems to me that there has got to be a considerable design task. I don't think that we can provide—I can't certainly provide—you with a suggestion that indicates this mix of lab centers, private enterprises, and so on. I think that needs much more careful design. You've had several suggestions made as to task groups or commissions that would need to be funded in order to do that, and I would recommend doing just that.

I think there are a couple of other pieces, though, structurally, that can be done in the short term. The references made here to Department of Defense research, made to NASA—that is an agency which hasn't particularly come up—but many of the State education agencies have been involved with NASA, with findings from their own research and the application of those toward education issues.

Incidentally, we've got a couple of joint projects with the Department of Defense and our council related to some of their research work having to do with the identification of job skills that are necessary, in the Navy to be specific, and whether or not those jobs skills are being provided in the secondary schools.

We are about to launch a joint effort examining several high schools with the Navy in order to make that determination. There are, as you pointed out, a number of different applications of learning devices and technologies that the military has used: hand-held calculators or computers which are taken out into the field for purposes of training troops on site in the use of weapons and tanks and so on. These are incredibly powerful techniques. That is available. The technology is not mysterious there, it's not hidden. The transmission of that information in to the educational system is not adequate, and I think there are perhaps faults on both sides.

My point is, that a shortfall structural issue that could be dealt with is providing the means through which, probably through the Department of Education OERI, there is a place, a capacity to be able to collect from the different Federal agencies those research efforts underway and put them into the transmission belt so that in fact they get out either through the labs, into the centers, directly to State agencies or local school districts.

That's not the end, but that would be, I think, an important advance; and it would help to round out this picture as to what is in fact being supported at least by the Federal Government and how it can be better tapped.

But I do believe that the issue of structure has got to borrow some on existent labs, it's got to borrow some on existent centers. I think it's got to tap on private enterprises, which have been represented here that have major efforts underway, whether it be in education or in welfare and health or in child care.

The key to putting it together is the importance of having perhaps that kind of joint administrative-congressional short-term apparatus that tries to get your design in place so then at least you see what is going on in the different places and you have a grasp of which ones of those you really want to put your money on by way of your appropriations.

Mr. OWENS. Perhaps—and you mentioned NASA is having considerable problems now, and a lot of their problems relate to education and the failure to develop the stream of scientists and technicians and have a pool to replace those that have gone, left because they've burned out or been fatigued or gone on to industry, and we can't get rockets up anymore.

If you're following the news, we're falling further and further behind the Soviet Union in the exploration of space, which we have set as a high priority for the Nation.

Our educational system is failing us. Our German scientists have gone home or they've grown old and died, and we have a serious problem in a high-priority area, and I think it relates to education.

So, we need to do something in that area of high-priority science and math education, higher education. So, they need a quango, maybe. Maybe we should have a series of quangos to address these goals of the kind that you have laid out. We need one for that. We need one for the goal of 100 percent graduation rate, and there should be others. Maybe four or five quangos instead of one are needed to direct an overall effort which collapses into that effort the labs, the centers, the independent researchers, the dissemination mechanisms, the private sector, the public sector, et cetera.

I was in Atlanta to visit the center for the assistance to the disabled of the IBM Corp. While I was there, the Vice President in charge of the "Writing to Read" Program talked to us, and I looked at that project. I had been reading about it for some time. And here is a private, profitmaking corporation that did all the development, research and development on their own. Of course, they contracted with knowledgeable educators to help develop it. But they are now going to guarantee the dissemination of it, I assure you. It's being used in far more places than I had realized, including 30 of our New York City schools. Their success rate is quite high with the "Writing to Read" Program.

But this is the private sector, and of course as we all know, the textbook publishers and a number of other people in the field are another important part of this whole effort that must be considered. They need to be brought into the operation.

I want to just ask a few specific requests.

Mr. Cross, if you could give us any records or any material you can find on work being done in the labs on disadvantaged, could you submit that to us at a later date?

Mr. CROSS. I will do that.

[Information to be supplied follows:]

SUMMARY SHEET-ESTIMATED LAB SERVICES FOR DISADVANTAGED POPULATIONS

Laboratory	Estimated amount spent on disadvantaged	% OERI lab budget	FY 1988 Total Lab Budget
Appalachia Educational Laboratory (AEL)	$ 456,189	31%	$1,494,000
Mid-Continent Regional Educational Laboratory (McREL)	299,304	17%	1,726,000
North Central Regional Educational Laboratory (NCREL)	994,500	52%	1,927,900
Northwest Regional Educational Laboratory (NWREL)	518,000	17%	2,958,000
Research for Better Schools (RBS) Mid Atlantic	922,000	30%	2,756,000
Regional Laboratory for Educational Improvement of the Northeast and Island (NE/IL)	1,153,000	49.4%	2,334,000
Southwest Educational Development Laboratory (SEDL)	860,777	45%	1,900,000
Southeastern Educational Improvement Laboratory (SEIL)	539,588	27%	1,982,000
Western Regional Educational Laboratory (WREL)	664,813	40%	2,460,000
Total	6,967,821		19,638,564

Across all labs, about 35% of the funds are directed toward activities intended to benefit the disadvantaged student.

Laboratory Appalachian Educational Laboratory

Listed below is each lab project and the approximate percentage of funding that is used to serve the disadvantaged, where known. where unknown, an estimate, based in part on the percentage of chapter I students in the region, is given.

Project	Disadvantaged Populations Served and % of project that serves them	FY 1988	FY 1989	FY 1990
Regional Liaison Ctr. conducts five activities working with and through existing organizations to improve schools & classrooms. Primary emphasis on Urban disadvantaged.	90% Blacks & Urban poor	$188,112	"	"
Classroom Instruction Program conducts 4 activities working with and through organizations to improve instruction.	21% Rural & Appalachian poor	53,725	"	"
School Governance and Administration conducts 4 activities works with and through organizations such as school boards & admin groups to improve schools and classroom.	21% Regional disadvantaged	53,725	"	"
Policy and Planning Ctr conducts 5 activites responsive to task 3, working with state level decisionmakers on school improvement issues.	21% Regional disadvantaged	39,361	"	"
Professional Preparation and Research Program works with region's higher ed. institutions and personnel to produce R&D and tech. asst relevant to improvement of elementary and Secondary education.	10% Regional disadvantaged	13,544	"	"
School Services Ctr. conducts 4 activites creating R&D based resources for school improvement.	21% Appalachian	68,852	"	"

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Rural, small schools deals with improving rural education in the region.	80% Rural & Appalachian poor	38,870	"	"

AEL's total public school population, according to the 1980 census, is 2,787,823 while the total disadvantage student population (Chapter I) in the region was listed as 592,945, or 21% of the population. Out of an annual budget of $1,494,000 AEL is spending $456,189 in FY 88, or approximately 31% of its budget on disadvantaged. In FY 89 and FY 90 a slight increase in the percentage allocated to serving disadvantage youth in the AEL region is projected.

Area covered: West Virginia, Virginia, Kentucky and Tennessee

Laboratory Far West Regional Laboratory

Listed below is each lab project and the approximate percentage of funding that is used to serve the disadvantaged, where known. Where unknown, an estimate, based in part on the percentage of Chapter I students in the region, is given.

Project	Disadvantaged Populations Served and % of Project and serves them	FY 1988	FY 1989	FY 1990
Middle Grade Coursework. Enable teachers to make concrete changes in their coursework that facilitate student thinking & writing skills and content retention.	17% Blacks, Asians Hispanics Native Americans Whites	20,747.48	"	"
Networking & knowledge for Effective Teaching. Serve as a regional resources; identify, synthesize & disseminate knowledge on effective teaching.	17% Hispanics Native Americans Whites Blacks, Asians	7,735.68		
Arizona Rural Schools: Teaching for Scientific Literacy Inservice Prg Assist in the improvement of science ed in Arizona rural public schools.	17% Native Americans Whites	3,162.68	"	"
Improving the Self-Directed Learning of At-Risk Elementary Students in the Oakland Unified School district Help Oakland elementary teachers learn how to foster students' self-directed learning.	17% Blacks	14,553.60	"	"
Organization Analysis & Design: Resource Development for District & School Improvement. Develop resource materials to help districts conduct organizational improvement & renewal.	50% Blacks Hispanics Whites	44,406.00	"	"

Assistance to State-Level School Improvement Project Provide technical assistance to State education agencies in conducting school improvement projects.	17% Blacks, Asians Hispanics Native Americans Whites	21,697.61	"	"
Providing Effective Training for Beginning Teachers. Exchange information and devise improved methods & materials for training and supporting beginning teachers.	80% Blacks, Asians Hispanics	115,343.20	"	"
Preparing Teachers for Work with Diverse Student Populations Exchange information and devise improved methods for preservice & inservice training for teachers in settings with diverse student populations.	80% Blacks, Asians Hispanics	68,335.20	"	"
Support for School-Level Leadership Provide technical assistance, training and information to improve leadership skills of school personnel.	17% Blacks, Asians Hispanics Whites	38,536.28	"	"
Regional Resource Ctr for Students at Risk Monitor regional needs develop a capacity for dissemination & referral, and prepare syntheses of research & theory.	80% Blacks, Asians Hispanics Whites	98,020.00	"	"
Educational Partnership & Urban Development. Gather, synthesize & disseminate information about partnerships between schools & businesses.	80% Blacks, Asians Hispanics Whites	28,634.40	"	"

Instructional Programs for At-Risk Students Chronicle the change process or document success indicators in California schools.	80% Blacks, Asians Hispanics Whites	25,851.20	"	"
Intensive Early Interventions for At-Risk Students. Longitudinal study of at-risk Black Children from birth through high school who are enrolled in an intervention program designed to prepare them for successful schooling.	80% Blacks	48,905.60	"	"
Total	40%	664,813.68		

Hence, approximately 40% of FWL funds from OERI ($2,460.000) are targeted at disadvantaged populations. Approximately 17% of the students in the region are eligible for Chapter 1 funds.

Area Covered: Arizona, California, Nevada and Utah.

Laboratory Mid-Continent Regional Educational Laboratory

Listed below is each lab project and the approximate percentage of funding that is used to serve the disadvantaged, where known. Where unknown, an estimate, based in part on the percentage of Chapter I students in the region, is given.

Project	Disadvantaged Populations Served and % of project that serves them	FY 1988	FY 1989	FY 1990
Disseminate infor foster networks, and provide technical assistance to improve education practice	15% Black/Hispanics/ Nat. Amer/Whites	91,980	91,980	91,980
Strengthen the region's capacity to design and implement policies that support school improvement	15% Black/Hispanics/ Nat. Amer/Whites	39,496	39,496	39,496
Develop new resources aimed at improving education for students most in need	30% Black/Hispanics/ Nat. Amer/Whites	80,824	80,824	80,824
Foster Region Comm by identifying emerging regional school improving needs	15% Black/Hispanics/ Nat. Amer/Whites	43,211	43,211	43,211
Rural Small Schools effort designed to improve student access to information about post secondary choices, expand course offering in technology and school focus on economic development	15 Black/Hispanics/ Nat. Amer/Whites	67,553	63,825	

*15% Eligible Chapter I

Fifteen percent of the students in McREL's regional are classified as economically/academically disadvantaged. Projected over the next three years, approximately $299,304 (17%) out of McREL's $1,725,949 annual budget will be directed towards effort designed to improve the educational development of disadvantaged students.

Area Covered: Colorado, Nebraska, North & South Dakota, Kansas, Missouri and Wyoming.

Laboratory North Central Regional Educational Laboratory

Listed below is each lab project and the approximate percentage of funding that is used to serve the disadvantaged, where known. Where unknown, an estimate, based in part on the percentaged of Chapter I students in the region, is given.

Project	Disadvantaged Populations Served and % of project that serves them	FY 1988	FY 1989	FY 1990
Urban Ed Network Radiating out from sites in Detroit, program provides support, materials and Technical Asst to urban schools	80% Black/Hispanic Whites	$221,000	"	"
Thinking Skills Develops & Disseminates materials/technology workshops to improve the teaching of strategic thinking skills	80% Black/Hispanic and Whites	65,000	"	"
Students at Risk Focuses on the T/TA, info. and technology needs of educators working with at-risk students in urban and rural areas	75% Black, Hispanic and Whites	188,500	"	"
Rural Education Uses telecommunications for staff development for the improvement of teaching reading and other skills in rural areas	50% Black, Hispanic and Whites	520,000	"	"

There are approximately 8,500,000 students in NCREL's region. Out of this total there are some 1,275,000 students who are eligible for Chapter I assistance. Consequently, approximately 15% of the student population in NCREL's region are academically/economically disadvantaged. As far as we can parcel out and estimate, the lab spends about 52% ($994,500) of it total budget ($1,927,900) on disadvantaged students in its region.

Area covered: Illinois, Indiana, Iowa, Ohio, Minnesota, Michigan and Wisconsin.

Northwest Regional Educational Laboratory

Laboratory: NWREL

Listed below are NWREL projects that appear to be directed, in part or in whole, toward disadvantaged in the region, along with the total funding for each of these projects. NWREL does not specify in its three-to-five-year-plan document those projects that are directed specifically toward the disadvantaged, nor does NWREL specify or provide any way to determine the proportion of disadvantaged served by specific projects or programs. Thus, it is not possible to determine exactly what proportion of these or any other NWREL project funds are directed toward the disadvantaged.

Project	Disadvantaged Populations Served	FY 1988	FY 1989	FY 1990
Policy Boards and Advisory Committees	Pacific Region Program Board; Indian Program Board; Urban Education Committee; Rural Education Committee	$108,000	$108,000	$108,000
R&D Access for Rural Schools	School board members, administrators, and staff of small rural schools in the region	$ 95,104	$ 95,104	$ 95,104
School Improvement for Indian Education	Administrators and teachers in public and tribal schools serving significant numbers of Indian students	$166,410	$166,410	$166,410
Pacific Local Capacity Building	Region's educational leaders, particularly On-Site School Improvement Teams	$143,362	$143,362	$143,362
Promising Practices for At-Risk Youth	Practitions in education and in employment and training	$ 46,001	$ 46,001	$ 46,001
Dissemination of Information and Documents	Rural educators, superintendents of urban school districts, Indian educators and organizations, Alaskan natives, and educators of the Pacific	$188,467	$188,467	$188,467

Project	Disadvantaged Populations Served	FY 1988	FY 1989	FY 1990
Indian Education Administration Handbook	Administrators of schools serving Indian students	$ 41,542	$ 41,542	$ 41,542
Effective Education in the Pacific	Professionals in education in the Pacific	$200,000	$200,000	$200,000
Parent Training as an Effective Schooling Practice	Culturally appropriate training materials will be prepared for use with Black and Hispanic parents and the teachers of their children throughout the Northwest region	$ 75,000	$ 75,000	$ 75,000

Note: The NWREL does not provide breakdowns of those served who are and are not disadvantaged. No projects are clearly and specifically targeted as serving only disadvantaged populations. A formula has been developed and applied as follows to provide a surrogate estimate of the percent of those served in the region who are disadvantaged.

The total number of school enrollments for each State in the region was obtained. These numbers were added to obtain a total number of school enrollments in the region. The total is 1,326,319 (FY87). The number of Chapter 1 eligible students in each state was then determined. These numbers were added to obtain a total Chapter 1 eligible student population in the region. This number is 232,014. By dividing the total number of students in the region by the number of Chapter 1 eligible students, it is possible to determine the percentage of students in the region who are Chapter 1 eligible. This percentage is 232,014 divided by 1,326,319 or 17.5%

The NWREL is funded at $2,958,000 each year, by OERI (not including the special "Rural Education Initiative" funding, which has not yet been accomplished for FY 1988). Assuming that NWREL serves all students in its region, one may assume that the proportion of disadvantaged served is 17.5% of the total. The dollar amounts of NWREL funds (under the OERI laboratory contract) that are directed toward serving the population of disadvantaged in the region can then be calculated by taking 17.5% of the total expenditures. These dollar amounts are $517,650 in each fiscal year.

The NWREL serves Region IX and Region X. Region IX consists of the States of Alaska, Hawaii, Idaho, Montana, Oregon, and Washington. Region X comprises the Pacific Basin, including American Samoa, the Commonwealth of the Northern Mariana Islands, and Guam. The NWREL also serves the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Belau, all formerly part of the U.S.-administered Trust Territories of the Pacific.

Laboratory Regional Laboratory for Educational Improvement of the Northeast and Islands (NE/IL)

Listed below is each lab project and the approximate percentage of funding that is used to serve the disadvantaged, where known. Where unknown, an estimate, based in part on the percentage of chapter I students in the region, is given.

Project	Disadvantaged Populations Served and % of project that serves them	FY 1988	FY 1989	FY 1990
Leadership for School Improvement--Research, Development, & Technical Assistance to Strengthen Training of School & District Administrators.	33%	21,000	"	"
Teacher Development--Improving Teacher Tng. and Inservice Development.	33%	50,000	"	"
Public Policy for School Improvement--Developing Reliable Data to support policy making for Educational Reform.	33%	68,000	"	"
Improving Schools for At-Risk Youth--Programs to reduce academic failure and school dropout.	100% At risk youth	313,000	"	"
Improvement of Rural and Small Schools--Implementation of the Rural School Improvement Initiative.	67%	336,000	"	"
State Specific Education Improvement Activities--Services that are designed and conducted for individual states rather than across States.	33%	129,000	"	"
Laboratory Operations, "Management, Evaluation, Regional Dissemination, and Collaborative, Work with other regions.	33%	236,000	"	"
Total		1,153.000	"	"

Of the 5,540,000 K-12 public school enrollment in this region in 1980, 33% were Chapter I eligible. The 1988 expenditure of $1,153,000 represents approximately 49.4% of the laboratory's budget for 1988. ($2,334,000)

Area Covered: New York, Rhode Island, Connecticut, Vermont, New Hampshire, Massachusetts, Maine, Puerto Rico and the U.S. Virgin Islands.

Laboratory Research for Better Schools, Inc.

Listed below is each lab project and the approximately percentage of funding that is used to serve the disadvantaged, where known. Where unknown, an estimate based, in part, on the percentage of Chapter I students in the region is given.

Project	Disadvantaged Populations Served and % of project that serves them	FY 1988	FY 1989	FY 1990
Coop. school Impr. Works with and through existing organizations to improve schools and classrooms	50% Black/Hispanics	385,000	"	"
Applied Research Works to dev. R&D based resources for school improvement	30% Black/Hispancis	120,000	"	"
National Networks Works with other labs and R&D Centers on regional and national Ed. problems	25% Black/Hispanics	58,000	"	"
Products for Special Populations - Dev's learning/teaching materials for non-urban minorities students	80% Black/Hispanics Whites	104,000	"	"
State Leadership Assistance - Works with state level decisionmakers on school improvement	25% Whites/Blacks Hispanics	145,000	"	"
Rural Education Works to increase student achievement in rural/small schools	25% Whites/Blacks Others	110,000	"	"
TOTAL		922,000		

The funding level for FY 88, is $2,756,000 of that amount, RBS spent 30% ($922,000) on the disadvantaged. According to Chapter I statistics, between 20-25% of the students in RBS's region are classified as educationally/economically disadvantaged.

Area Covered: Pennsylvania, Delaware, New Jersey, Maryland and Washington, D.C.

Laboratory Southeastern Educational Improvement Laboratory

Listed below is each lab project and the approximate percentage of funding that is used to serve the disadvantaged, where known. Where unknown, an estimate based in part, on the percentage of Chapter I students in the region, is given.

Project	Disadvantaged Populations Served and % of project that serves them	FY 1988	FY 1989	FY 1990
Improving Mathematics Instruction	60% Black/Hispanic White and others	$ 84,107	"	"
Improving Writing Instruction	40% Black/Hispanic/ Whites and others	33,508	"	"
Dropout Prevention	50% Black/Hispanic/ Whites and others	28,634	"	"
Improving Educational Leadership	35% Black/Hispanic/ Whites and others	25,126	"	"
Making Effective Use of Technology	30% Black/Hispanic/ Whites and others	59,400	"	"
State Policy and Educational Reform	20% Black/Hispanic Whites and others	31,258	"	"
Teaching Profession	30% Black/Hispanic Whites and others	30,704	"	"
Rural Education	30%	246,849	"	"

Of the total enrollment in the region of 5,918,344; 1,337,748 or approximately 23% have been identified as being economically and educationally disadvantaged. Of its total budget ($1,983,000), SEIL devotes an estimated $539,588 or 27% which exceeds the number of disadvantaged (Chapter I eligibles) identified in 1980.
Area covered: Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina.

Laboratory: Southwest Educational Development Laboratory

Listed below is each lab project and the approximate percentage of funding that is used to serve the disadvantaged, where know. Where unknown, an estimated, based in part on the percentaged of Chapter I students in the region, is given.

Project	Disadvantaged Populations Served and % of project that serves them	FY 1988	FY 1989	FY 1990
Theme C Administrator Tng and Staff Development	22% (Chapter I figure for the region)	$ 52,000	$ 52,000	$ 52,000
Theme D Collaborating on Sch Improvment in 5 Demonstration sites	80% Indian, Black, Hispanic & Low Income White	330,630	330,630	330,630
Theme ED AIDE Assisting state level policy & decisionmakers in making better decisions through rapid response to their requests for information	22% (Chapter 1 figure for the region)	64,950	64,950	64,950
Theme E Facilitating student Achievement through improving programs for Teaching of Reading, Writing and Thinking Skills	22% (Chapter 1 figures for region)	61,600	61,600	61,600
Task 5 Collaboration with other labs and organizations	22% (Chapter 1 figures for region)	32,472	32,472	32,472
Rural Small Schools Initiative Turnkey Training in Thinking Skills Instruction for 30 Demonstration sites using SEA, ESA, IHE staff to train teachers at the 30 sites	75% Indian, Black, Hispanic and Low Income White	319,125		

Total for SEDL FY 1988 is $860,777 which is 45% of the lab's ($1,900,000) budget.

Area Covered: Arkansas, Louisiana, New Mexico, Oklahoma and Texas

Mr. **Owens**. Also, I want you all to know that this was a bipartisan effort, very much encouraged by Assistant Secretary Finn, who wanted to see the results of these hearings, and my colleague the ranking Republican on the committee who couldn't be here today, Mr. Bartlett, is also very supportive. We all want to see if we can develop the very best, most credible research and development effort by the Federal Government.

As I said to Mr. Bartlett, we probably are inevitably going to disagree when it comes time for authorizations and appropriations. And we agreed not to discuss levels of authorizations and appropriations in these hearings.

But, at a later point, I would be very interested in any thoughts you have on what kinds of monies are needed to have a credible and scientifically valid research and development effort.

Mr. **Owens**. We had testimony yesterday from representatives of business and industry who said you don't have a viable research and development effort going unless it's one percent of your overall total effort. And whether you want to look at the overall effort in education as being financed by every level of Government or you just want to look at the level of effort in education financed by the Federal Government, we are still far below the 1-percent investment for research and development.

I think if these time-honored standards of industry and science can't be our guide, then what can. We certainly should start looking at that one percent figure as a goal that we have to move Congress in that direction.

We are going to need all the help we can get from the members of the education family. The internal educational community has to agree on a number of things as we move towards getting the kind of funding for research and development we need.

But most of all we do want to not back away from being able to commit ourselves to achieving some visible results in the short term and in the long run.

These hearings have been vital to us. They have confirmed the fact that educational research and development is indeed in something of a crisis, a crisis that has largely been silent and unnoticed. We spend $150 billion on education in this country, but only somewhere around $100 million on education research and development by the Federal Government.

We were told yesterday that Xerox alone spends $700 million on research and development, a far greater proportion of its total income than the Federal Government.

The question of education for the disadvantaged in this Nation has also not been well addressed, and we are shocked to find it has been neglected to such a great extent. We have an enormous problem, problems of 50 percent dropout rates in the inner cities, lack of basic literacy, numeracy and scientific knowledge among even those students who do graduate.

One example was pointed out to us by Dr. Coleman yesterday that even our very best students in biology and science and chemistry, when tested and measured against European Asian students, do not show very well.

Priorities need to be examined, need to be looked at as well as higher funding levels. All of it must be done at the same time. This

Subcommittee will deal with the crisis in two stages. There is a short-term emergency to get education of the disadvantaged listed as a top priority. A short-term emergency to deal with the fact that educational researchers and the activity in general is being treated as a second-class activity within the Federal Government and hampered by all kinds of obstacles that need not be in place.

The Secretary has proposed a center on the study of the education of the disadvantaged. We think that's a good initiative. Such a center must draw upon the best minds and thinking in the Nation. It must have an unquestioned and unbending commitment to change.

The long-term issue is how we can begin to make educational research and development relevant to the Nation's needs and priorities. And we must also make the decisionmakers understand how relevant it is.

In this context, we will look at the possibility that several witnesses have already referred to, the establishment of some mechanism, a commission or committee, to study the state of educational research and to maybe commission other entities to study it and as swiftly as possible make recommendations about the overall problem of restructuring and setting priorities.

The Subcommittee will also be preparing, as I said before, our own legislative report on these hearings as a result of these hearings, and we intend to issue that no later than June 15 of this year. It will contain an analysis of the testimony presented in these hearings as well as the continued input of the panelists who testified who might be consulted afterwards and other persons.

We also will make some concrete recommendations that we hope will serve as a catalytic agent for the larger effort to establish a commission or to conduct studies.

All of this activity will play a role when the Subcommittee comes to reauthorize the General Education Provisions Act beginning in 1990. We are not limited, however, to activities which will take place in 1990. Amendments of the present act can take place, and we will consider the possibility of immediate amendments to deal with the urgent nature of the problems that we face.

Again, I want to thank all of you for your written testimony and for being here today to take part in this discourse with us. The Subcommittee will be in close touch with each one of you in the future.

Thank you again.

The hearing is now adjourned.

[Whereupon, at 1:07 p.m., the subcommittee was adjourned.]

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